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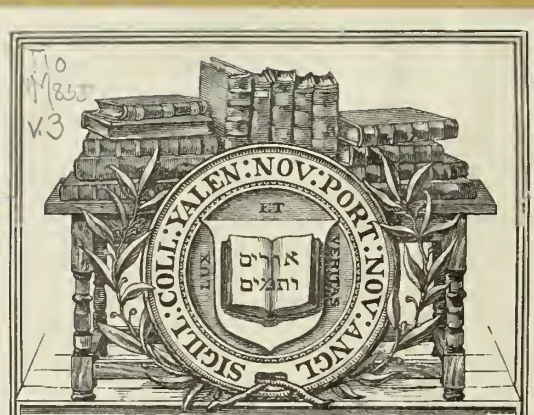

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Original articles are followed by the author's name, as are also all signed editorials and correspondence. The following abbreviations are used:

abs...abstract.
app...new instruments and appliances department.
cor....correspondence.
e.....new equipment department.
ed....editorial.
h.....home-made hospital appliances department.
illus...illustrated or illustrations.
k.....hospital kitchen department.
n.....department of nursing.
q.....queries and answers.

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THE MODERN HOSPITAL

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WHERE FREE PATIENTS WILL FARE WELL.

Mount Zion Hospital, San Francisco, Has Built Magnificent Structure for Pay and Free Patients—Some New Features in Equipment.

By JAMES H. McCLELLAND, M. D., San Francisco.

THE Mount Zion Hospital of San Francisco has two distinct objects in view—one, the maintenance of a free clinical department for the needy sick, and the other, a private department to help defray the expenses of the former. The hospital building has therefore been constructed on a somewhat unique plan, so that these two departments, though housed in separate wings, can be operated on an economical basis as regards nursing and service.

In general, the plan of the building is as follows: the north portion contains the free service department, the south the pay service; the two wings are connected by means of a corridor on each floor; the kitchens are situated on the ground floor between the two wings, thus serving each building equally well. The operating and maternity departments are on the fourth floor, and are arranged so that they are convenient to each other. The general plan of the building was designed by Krafft & Sons. Miss J. F. Mackenzie, the former superintendent of nurses of the hospital, arranged a large part of the interior detail work, and the plans were passed on finally by Dr. S. S. Goldwater, of New York. Miss E. McCalmont, of New York, and Miss Mackenzie, with the assistance of the ladies' auxiliary of the board of directors, selected the furnishings and equipment.

The group of buildings consists of the outpatient clinic, the nurses' home, engine room, laundry, employees' building, and the main hospital building. In the near future a new nurses' home of modern construction is to be built on the lots adjoining the hospital.

As stated above, the main building consists of two portions. The north part, or Esther Hellman building, contains the free patients' wards, maternity department, and operating rooms; the south wing contains the pay patients' rooms and wards, and the various offices and dining rooms.

The buildings are of reinforced concrete construction, faced with yellow tile brick. The floors are of various materials—terrazzo in the large

Fig. 1. Mount Zion Hospital—South wing and main entrance.

wards, oak in the private rooms, and white tile in the halls, baths, and utility rooms. Steel lathing was used throughout, on which was put a hard wall plaster; thus the only wood used in the construction is found in the doors, window casings, and floorings in private rooms, making the building practically fire-proof. A complete ventilating system of the hot and cold air type was used, electric elevators were installed, and the steam system of heating.

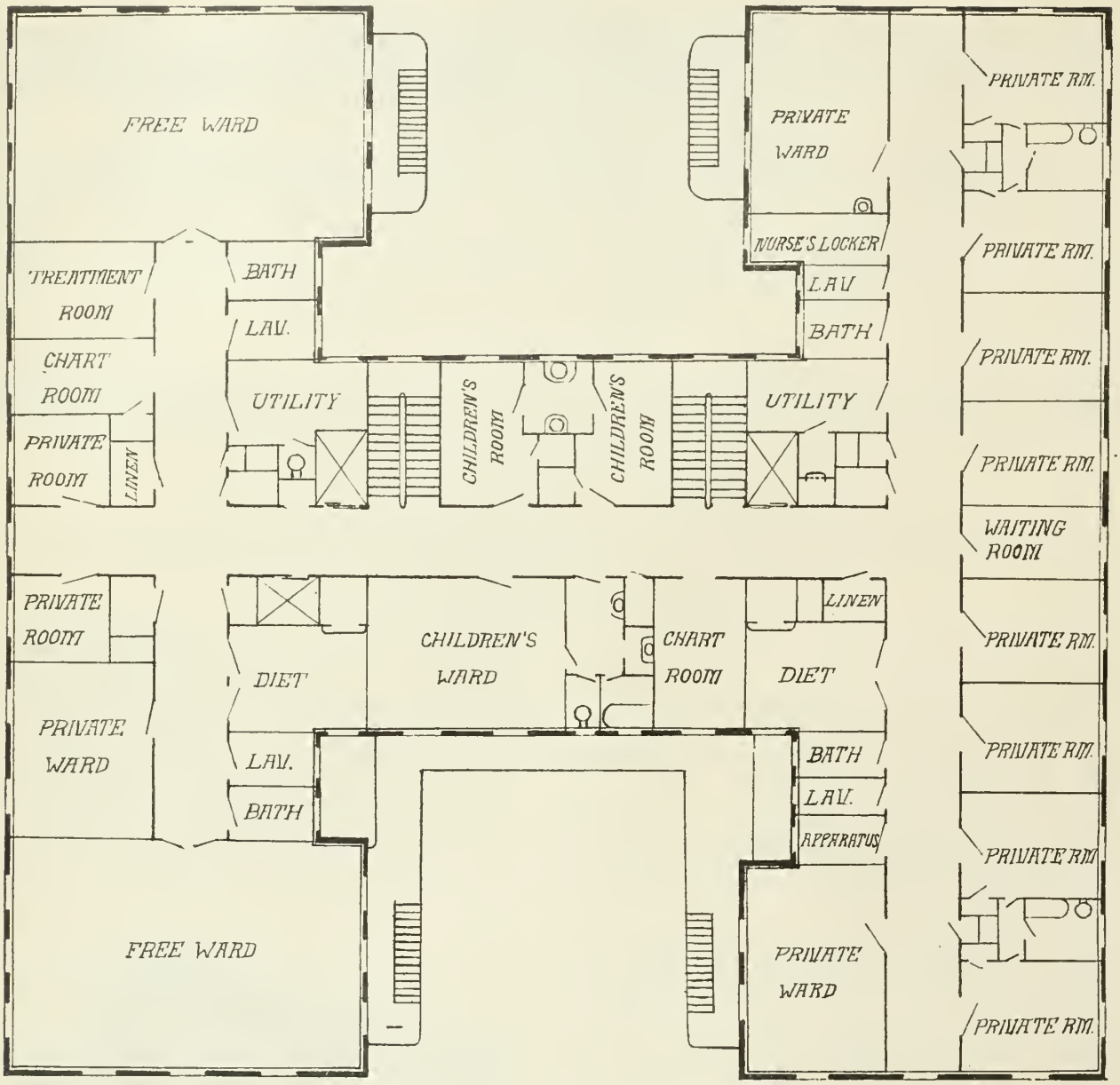

Fig. 2. Mount Zion Hospital—Third floor plan.

As one approaches the main building from the south he sees that portion allotted to the private rooms, offices, and dining rooms. The main entrance faces south on Scott street. On entering the building the offices lie on the first floor to the right, the dining rooms to the left. The entrance leads straight through the long hallway to the north side of the Esther Hellman building (the north wing), at which point is situated the ambulance entrance. The three elevators are located in the central portion of this main corridor. The kitchens are situated on the ground floor, and occupy the rear central portion between the two wings. Three large rooms are allotted to this use—the main kitchen, the general service and diet kitchen, and the special diet kitchen for private patients. Two electric dumb waiters communicate with the various floors, one to each wing. By this arrangement one force of employees can handle the food going to each wing, and send it up with the least delay. As many labor-saving machines as possible have been installed in this department—for example, automatic bread cutter, electrically operated meat and vegetable chopper, mechanical meat slicer, electrical coffee grinder, electrical potato peeler, dishwashing machines, and electrical silver polishers. The main stoves are fitted with crude oil burners, the vegetable cookers are supplied with steam, and gas furnishes the heat to the baking ovens. Various store rooms, drug rooms, chemical laboratory, x-ray laboratory, and receiving and examining rooms for clinic patients occupy the balance of this floor.

A description of the various departments of a typical floor—for example, the third, a plan of

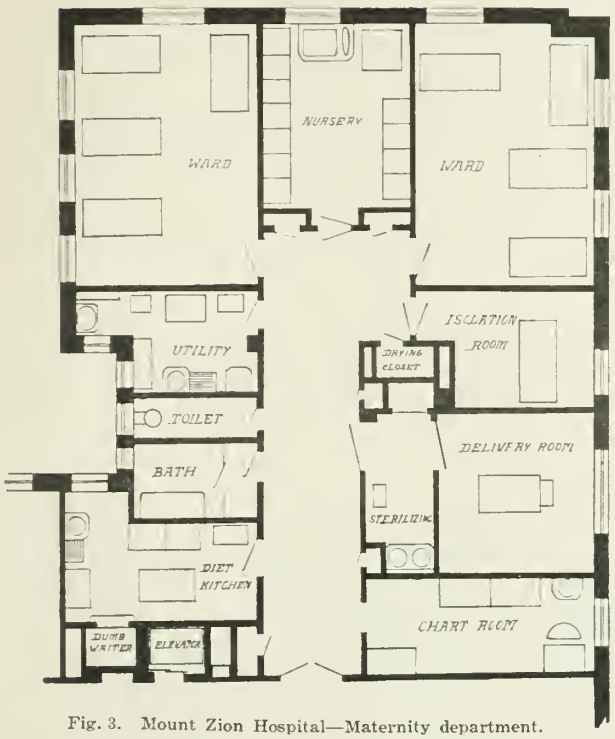

Fig. 3. Mount Zion Hospital—Maternity department.

which is submitted—will give in a brief way the most comprehensive idea of the detail. The large wards are situated so that they have sun all the day in some portion, and occupy positions on either end of the north wing. They were designed to hold 14 beds, but for the present 10 were considered all that were necessary. These beds have small rubber-tired wheels, which facilitate the moving of the beds about the ward. Between the posts at the foot runs a rod so arranged that the extra blankets can be folded over it. Extension posts run up from each corner, and at a height of about 6 feet are connected by cross rods, on which curtains are hung. This allows the patient to be screened off, so that the usual cumbersome screens are not necessary. Each patient has a bedside table and tray table. The bedside table is of white enamel, with shelves opening to the rear, and is equipped with a rail in the rear on which to hang the washrag. The tray tables are designed with a square standard, so that the set-screw operates easily, and when set only lightly the table cannot slip or rotate on the shaft. The bath and toilet for each ward are situated immediately outside the door opening into the hall, as also is the treatment room.

The two large wards constitute the principal portion of this wing, but in addition it has a small 4-bed ward, a single room, and the various work rooms with which every wing and department is supplied. Thus we have a chart room, utility or sink room, toilets and baths for each male and female ward, diet kitchen and treatment room, porters' closets and drying room, and, lastly, numerous lockers, closets, and storage space.

The utility rooms are most complete. In each one we have a utensil sterilizer, instrument sterilizer, bed pan washer and sterilizer, bed pan warmer, gas stove, slop hopper, bed pan rack, urinal rack, and rack for ice bags and hot-water bottles. Adjoining each room is a small closet in which is an opening to the linen chute, shelves for storage of various articles and utensils, and a ventilated locker for specimens of urine, feces, and sputum.

Fig. 4. Mount Zion Hospital—Free ward. Note screens, rugs, and bed-rollers.

Fig. 5. Mount Zion Hospital—Private room.

The treatment rooms have their own sterilizers, washing-up tubs, and operating table, and have the usual various tables and basin stands and instrument cases. These rooms are used for minor operations and dressings.

Adjoining the treatment room and opening into the main hall is the chart room. It is supplied with a white enamel desk, over which is the annunciator board, and the intercommunicating telephone. One side of the chart room is lined with shelves and lockers, and a large storage closet for dressing trays opens into it. The charts are numbered and hung each on its own hook on the opposite side of the room above the desk.

A central position has been given to the diet kitchen, midway between the two main wards of the wing. In these rooms great care was used in arranging the various apparatus and tables in order to facilitate the transportation of trays and food from the dumb waiter to the patient. The warming table stands near the opening to the dumb waiter. A large table with several shelves occupies the central portion of the room. The cupboards line one side, and gas stoves, sink, and drain board are placed at the further end of the room. Each diet kitchen is equipped also with a Pasteur filter and a refrigerator.

The private wards on this floor are equipped much the same as the large wards, though only 4 beds are placed in each one. The south wing, for private patients, on each floor has the same chart rooms, diet kitchens, etc., as the free side of the hospital. The private rooms are fitted with brass beds in the better rooms, and with dark finish eucalyptus furniture. The rooms near the central hall have white enamel beds and furniture. Each room is equipped with a bed, dresser, bedside table, bedside tray, Morris chair, rocker, and straight chair. A wash basin with hot and cold water has been installed in every room.

The children's wards are located between the two wings off the main hall. The large ward for small children is on the west side of the hall; the two small wards are on the east side. The walls are decorated with children's pictures and Mother Goose rhymes, and, to further add to the pleasure of the occupants, a toy cabinet stands in the large ward wall filled with playthings. The children's furniture is finished in white, and the cushions and rugs are blue, so that altogether it forms a very attractive and handsome little ward.

The maternity department and the suites of

Fig. 6. Mount Zion Hospital—Utility room.

operating rooms are on the fourth floor of the north wing. Three main operating rooms are in this suite; the two larger rooms face north, the smaller room east and south. The sterilizer room is situated between the two larger rooms. Other rooms in this department are the doctor's dressing and locker room, nurses' work room, rooms for anesthesia, washing up, and instruments, and various closets and lockers for utensils and dressings. The walls of this suite are finished with white enamel tiling on the lower 6 feet; the upper portion with the ordinary hard wall plaster.

The maternity department is a complete unit in itself, as it is provided with its own diet kitchen, utility rooms, and other work rooms. There are a few things in this department to which particular attention should be called, particularly the method of bathing the patient on admission. The women who enter these wards, as a rule, require unusually thorough washing and cleaning before being put to bed. In the case of all other ordinary patients who enter the hospital the bathing is done in the examination and preparation room near the entrance to the Esther Hellman building, but it has been decided not to be a good plan to change the clothes and bathe the woman in the first stage of labor at such a distance from the delivery room. Thus a room was set aside for this purpose in the maternity department, and instead of the tub a marble bath slab has been provided. This is covered with a mat, and the woman in labor can be conveniently bathed with a spray nozzle and brush without being immersed. The same idea has been followed in the nursery, a bath sink having been installed. The baby, when being bathed, is laid upon a towel and sprayed with water the temperature of which is regulated by a mixing valve. Some new ideas have been embodied in the construction of the delivery table. It is shorter and wider than the usual table, measuring 3 by 5¾ feet. A railing has been built across the head, and at the foot a shelf has been placed which can be raised or lowered at will. The surface of the table consists of metal lattice work, which forms a firm surface, and over this a firm mattress has been placed. A large window has been built in the wall between the sterilizing and the wash room and the delivery room, and thus a nurse attending to this portion of the work can see when her services are required in the delivery room.

Fig. 7. Mount Zion Hospital—Diet kitchen. Note center table and blackboard.

On the fourth floor is also a large treatment room for eye, ear, nose, and throat. All operations coming into this service not requiring anes-

thesia are performed in this room. Adjoining this is a smaller, dark room, in which examinations can be made. The walls and tiling of this room are of olive green.

The ventilation of the hospital is provided by apparatus located on the roof and in the basement. It is of the hot and cold air type, and has proved to be very satisfactory, it having been found not necessary to operate it continuously. The fans are set going during the morning, when the operating room is busy and treatments are being given through the house, and for a short time after meals.

The engine room and laundry occupy separate buildings. The engine room occupies the basement, the laundry the ground floor, and the upper floor houses the male help. The engine room is reached from the basement through a tunnel through which the steam and water supply are transmitted. Adjoining the engine room two

Fig. 8. Mount Zion Hospital—Delivery room in maternity department.

large high-pressure tanks are placed, which supply the hot and cold water for the building. The water sterilizing apparatus is located on the roof, and supplies the treatment and operating rooms with sterile cold and hot water.

Two sun rooms, one on each wing, are located on the roof; the balance of the roof is used as a roof garden—that on the north wing for free patients, and that on the south wing for private patients.

It is planned in the near future to add a complete hydrotherapy department in connection with the hospital, and it will be placed on the roof of the north wing. In addition to this and the nurses' home, it is sincerely hoped that a new wing can be added to accommodate more patients, as already we have felt that the demands made upon the institution are more than it can fulfill even with its new building.

Elizabeth City to Have Up-to-Date Private Hospital.

The 50-bed private hospital soon to be erected at Elizabeth City, N. J., promises to be an artistic structure and modern in every particular. It will be located on an eminence on the banks of the Pasquotank river, commanding a broad view of the bay. The building will be of a pleasing semi-classical design, with broad Corinthian porticos, surmounted by an elliptical dome, open-air balconies, solariums, etc., with Spanish tile roof and broad, extending eaves. The general plan of the building is that of a Greek cross, 100 feet square, which is so placed with the points of the compass that sunlight finds its way into each room during the entire day. The buildings will be constructed of brick, veneer, and stone, and will have the most modern mechanical equipment in the way of heating plant, sanitary plumbing, elevators, dumb waiters, clothes chutes, electric lights, gas, bell system, etc. The ground floor, which is entered beneath the main portico, porte cochere, etc., will consist of general reception rooms, business offices, treatment rooms, baths, patients' rooms, wards, furnace rooms, and dining hall, with complete kitchen equipment. The main exterior approach to the principal floor is made by stone steps on either side of the portico, which is composed of four shafts more than 20 feet high, which stand out boldly against a red brick background. Passing through the portico, which is paved with English quarry tile, a vestibule is entered, thence through a reception hall to a central rotunda which, with its cross corridors, affords a complete circulation of air. To the right are the resident physician's quarters, head nurse's office, x-ray laboratory, patients' rooms, with private baths, etc. On ascending the stairs, thence to the rotunda, on the right is the operating, sterilizing, anesthetic and doctors' rooms, nurse's utility, bath rooms, wards, etc. The operating room is of the most modern sanitary plan, with tile floor, vitrolite seamless wainscoting, glass plates, etc., in semi-circular form, having a direct northern exposure, which gives an abundance of light. To the left are open-air balconies, private rooms, baths, etc. The third floor is arranged for nurse's quarters, with every idea of convenience, consisting of cosy bed rooms, connected up with cross corridors, which afford light and ventilation and lend a homelike appearance. The general manager of the hospital is Dr. John Saliba, B. A., M. D., C. M., a graduate of medicine and a master of surgery of the Edinburgh University of Scotland. After his graduation, Doctor Saliba visited the London, Paris, and Vienna hospitals. He served for several years as surgeon in St. George's Hospital, and during the Anglo-Boer War was appointed by the British Government civil surgeon to the English forces, in which capacity he served for two years with distinction.

Mrs. Anna Clinton Hermance has been appointed superintendent of Ann May Hospital, Spring Lake, N. J. Mrs. Hermance was formerly head of the Ridgevale Inn, Madison, N. J., also served at the Anchorage, Port Washington, and for a time was housekeeper for Dr. Walker's Sanatorium. Miss Rose M. McDonald, formerly head nurse in one of the large Los Angeles hospitals, has been appointed superintendent of the training school. Dr. Joseph A. Geis, formerly at Bellevue and Flower Hospitals has assumed the duties of house physician. At the last meeting of the board, Mrs. Samuel Heilner announced that a friend of the Hospital Alliance would pay the rental for the summer for a beautiful cottage near the hospital for a summer home for nurses. Mr. Cornelius S. Loder, the New York efficiency engineer, has recently completed his second visit to the hospital to check over the plan installed by him last winter.

THE VALUE OF CONVALESCENT LABOR IN HOSPITAL WORK.

Care Required in Selection of Patients and Their Employment—Abuses Should Be Avoided—Nurse Efficiency Tested in Directing Such Labor—Medical Skill Necessary for Discretion—Details of Handling Patient Labor.

By CHARLES F. SANBORN, M. D.
SUPERINTENDENT CINCINNATI GENERAL HOSPITAL.

THERE is so much to be said on this subject that one hardly knows where to begin or what to say first, especially when it is remembered what large amounts of money are uselessly spent every year for needless employees by municipalities, counties, and states.

With our large increase of alien population every year, coupled with the fact that many thousands of these aliens have little ambition or desire to make a living for themselves or get ahead in the world, to say nothing of their capability, but are inclined to become dependent when the slightest provocation or opportunity presents itself, the problem of patient labor becomes a very serious one in our invariably overcrowded hospitals, asylums, almshouses, and all other similar institutions. Millions of dollars are being spent every year in America in caring for patients, and incidentally in fostering dependency and a spirit of idleness among those who should be taught to help themselves to some extent at least, with the result that the burden of the taxpayer is rapidly reaching the breaking point.

It goes almost without saying that any person who knows anything about hospitals can visit any of them at almost any time, and see patients sitting around who might be doing something, this being more especially true in charitable institutions. Of course this evil is reduced very greatly in some of our best managed charitable institutions, but it probably exists to some slight extent in even the best. In many modern hospitals convalescent patients are discharged too soon in order to make room for other incoming patients, or in many instances to reduce the expenses of the hospital, and they immediately become public charges in some other institution because of their inability to wholly support themselves.

Public welfare workers in all communities are doing a wonderful amount of good in helping to partially solve the serious conditions, and no praise or credit is too great to bestow on them, but the efforts of these workers are wholly inadequate to cope with the situation, partly because there are never enough workers available. So the question at once arises as to the best way of handling and caring for these convalescent patients, who do not actually need hospital care any longer or must leave to make room for others, but who are not able to support themselves wholly and have no home to go to. In many instances such patients are sent to an infirmary or almshouse, which is usually managed in an incompetent manner, and where no system whatever is in vogue for the employment of patients; thus they again become public charges at once, and frequently remain so for the rest of their lives, just because no one cares enough about them or takes the trouble to think out any method or system of employment for them.

Some hospitals in New York and elsewhere have established so-called convalescent homes in the country, where the patients in question are sent, and where various forms of diversion and occupation are provided, with the result that large amounts of money are saved and patients receive great benefit and rapidly become self-supporting. If many of our other large hospitals would adopt some such scheme, which relates more especially to patient labor in the after-care of the sick and afflicted, the results would be of far-reaching benefit, as it is in just these cases that the most good is derived in many instances both to the community and the patient himself, in that chronic diseases may be prevented and the patient be taught industrious habits.

The after-care of indigent convalescent patients by means of occupation is a subject worthy of the most serious consideration and thought, especially from an economic standpoint, but the establishing of convalescent cottages in the country, where various forms of work can be developed, seems to be the best solution of the problem. Incidentally it may be said that this question of labor and employment is a very serious one among insane patients, for whose scientific care and so-called treatment communities are spending many millions of dollars annually in having highly technical examinations made and voluminous histories written, with a little laboratory work now and then; all this at enormous expenditure of public money, while the chronic dement sits in idleness, and with as little prospect of receiving benefit from the expensive treatment as there is of curing or restoring a cardiac valve which has undergone calcareous degeneration. Why not adopt the Wis-

consin idea, and give these patients employment which will perhaps benefit themselves, and will certainly help the community in a financial way? We now must consider the employment of convalescent patients while they are actually and necessarily confined as patients in an acute disease hospital, as indicated by the title of my paper.

WAITING ON OTHER PATIENTS.

It is a fact beyond dispute that patients confined to their beds in the wards of a modern hospital complain to their friends and relatives of not being waited on properly and sufficiently, and this one complaint has caused more trouble and annoyance to many hospitals than any other single criticism. The signal system for calling nurses is now installed in every well-constructed hospital, but the nurses can easily be busy temporarily with other work, so that the signals are not at once noticed, and then the nervous sick patient begins to find fault, whether it is justified or not. No signal system device is so perfected at present as to attract the attention of nurses who may be busily engaged in other work. It is just in such instances as these that the value of convalescent patients' help is well worth considering. The resourceful head nurse on the ward will constantly be telling the convalescent patients to watch the signals, or call the attention of the nurses to anything wanted by the bed patients, if the signal system is not in use or has not been installed. These patients who are usually up and around the ward, can easily relieve the nurses of much unpleasant and disagreeable work, and can oftentimes act as orderlies and thus reduce the pay roll of the institution. They can carry bed pans and urinals, assist in cleaning the floors and walls of the ward, carry bedding back and forth, assist in distributing the food at meal time, act as messengers, watch the conduct of visitors, and do a dozen other things that will come up every hour of the day on almost any ward. Patients who are weak and feeble will need assistance in getting out of bed, in going about the ward in a wheel chair, and in being taken to and from the clinic.

Of course it is some trouble to the nurse to be constantly teaching new patients to wait on other patients, and just this point will often demonstrate the fitness or unfitness of a head nurse to hold her position. The tendency is to keep patients who are ward workers for an unnecessarily long time until they remain for many weeks or months, especially in large charity hospitals, and the nurses have to be constantly watched to prevent this. The tact and resourcefulness of the nurses in some of these minor essential details help in no small degree to determine the standing of the training school, and even the hospital itself; in other words, the requirements for admission to the training school must be of a high order, and in this way intelligent nurses secured, in order to get the best results, and not have nearly 40 percent of the entire nursing force on each ward consist of merely unqualified women who are trying to do nursing duty, but who are merely attendants and do not belong to the training school at all, as is done in one of the very large charity hospitals in the middle West with which the writer is very familiar. Under such conditions as these not much can be expected in the way of development of convalescent patient labor, and certainly not much is obtained.

THE SERVING OF MEALS.

This subject has been merely mentioned in the above paragraph, but is well worthy of careful planning and thought, because the appetite of most hospital patients is determined by the manner in which their food is served to them, and the way in which it is prepared. On the average hospital ward in charity institutions there are never enough nurses to serve the food quickly enough to have it hot when it reaches the patient, and at the same time have it appetizing in appearance; so it is right here that the value of the assistance of convalescent patients becomes apparent. These patients, as a rule, cannot be trusted to arrange the trays for bed patients, but the nurse will have to supervise this herself. The patients can, however, be of very great assistance in the quick distribution of the food, and in the cleaning up of the ward after the meal is over.

No doubt some persons will say that these are all well-known and simple matters, with which everyone is familiar. Yes, this is quite true, and it is also true that these simple matters are most often overlooked and neglected, even though to a considerable extent the very reputation of the hospital stands or falls on the manner in which the food is prepared and served to its patients. So the question of the serving of meals becomes a very important one—in fact, so important that the good superintendent is constantly watching it, and seeing that the nurses are always instructed to do the same. Convalescent patients can often assist in the rough preparation of food, such as preparing vegetables to cook, washing kettles, etc.

This entire question is so important that it seems worth while to have each nurse on the ward detailed to assist in carrying out the plan; that is, one or more nurses could be assigned to instruct such patients as are in condition how best to assist in serving meals to bed patients; another nurse could be assigned to instruct patients how best to

wait on bed patients or assist in doing so; still another nurse could be assigned to instruct patients to assist in cleaning wards; another nurse could instruct convalescents how to feed bed patients who are unable to feed themselves, because there are never enough nurses to do this important service as it should be done. In this way a sort of organization is formed among the nurses, and the very best results are obtained. I believe it is not wise or economical to retain a lot of patients in a large city hospital just because they are able to do a little work, when in reality they are infirmary cases, and it will perhaps require six of them, more or less, to do the work of one able-bodied man—in other words, it is better to have a good employee and pay him for his work, not only because better results are obtained, but because it is cheaper. The question of just what patients to allow to work, and how long it is worth while to allow them to stay in a charity hospital, is one which requires constant study, not only on account of the economic side, but because of the practical results to be obtained, and it goes without saying that the superintendent must be experienced in hospital matters in order to do anything like justice to the institution, the patients, and the community at large.

The selection of patients to assist in the proper serving of food must be done with care, and of course none having infectious or contagious diseases should be considered, or those who are personally inclined to be careless or untidy. Here, again, the ability and judgment of the nurse is of the greatest importance, and to obtain the desired results the standard of the training school can hardly be made too high, as this shapes the results obtained in everything that is done on the wards, and reflects credit on everyone connected with the institution.

CLEANING.

The problem of keeping the hospital clean is very much simplified when the hospital itself is so splendidly equipped and constructed as is the new Cincinnati General Hospital, in which the very best vacuum cleaning machinery is installed in all of the basements, and extensions are made to connect with every ward in several convenient places, so that the cleaners can be attached quickly to any of the numerous openings in the walls of each ward at any time. Furthermore, every ward in this hospital, as well as the operating pavilions, are provided with small refuse and garbage incinerators, which are built into the walls in such a manner that the door of the incinerator is flush with the wall. These incinerators are heated by means of natural gas, which is the fuel used for the entire hospital, including the power plant, and the incinerator gas burners are so constructed as to produce great heat. By means of these appliances all dust and floor sweepings can be quickly removed from the wards, and all soiled dressings, garbage, etc., can be quickly and conveniently burned on the ward. Such arrangements as these are, of course, ideal, but unfortunately not all hospitals are constructed in this way, and then the problem of cleaning becomes more difficult, although plenty of cleaning will have to be done even where such ideal conditions as above described exist.

Nothing serves more to increase the efficiency of the hospital in the eyes of the public than clean wards and corridors, and many an institution has received undesirable publicity because of a lack of constant attention to this detail. Many hospitals for the general public constantly have large numbers of employees who do nothing but clean and scrub, and the expense to the municipality is, of course, very great. A competent superintendent can reduce the number of these employees by carefully planning the best method of doing the work with the least amount of paid help, and it is here that convalescent patient labor becomes most valuable. These patients can wash windows, floors, walls, dust furniture, and do many other things of a like nature. One important thing is to arrange to have all this cleaning done on the wards before the attending staff make their usual daily visits, as there is nothing more annoying to an attending physician than to have cleaning done on the ward while he is trying to examine a patient.

Here, again, arises the question of seeing that patients who do a little work do not remain too long in the wards of a charity hospital. To decide this problem requires the experience and judgment of a medical man, and in no event should patients be allowed to remain for long and indefinite periods because they have political friends. Scandals due to this have arisen in many public hospitals, and notably in Cook County Hospital, which was justly characterized not long since by a well-known hospital expert as the worst administered hospital in America, presumably because of the political appointees that have been at the head of it for many years past. Such things as this can be very easily avoided by adopting the simple rule of having the names of all patients who have been in the hospital more than sixty days reported to the superintendent at the end of each month, who will then have each case investigated through the public welfare bureau or otherwise, and in this way get rid of all those who are undesirable.

I cannot emphasize too strongly the necessity of having a well-organized system throughout the hospital for getting convalescent patients to assist, not only with the cleaning, but in all other kinds of work. If this is properly planned, many thousands of dollars can be saved to the hospital every year, and the patients themselves benefited very greatly. In order to get the desired results, the hospital administrator must be a man of training and hospital experience—almost necessarily a physician—and under these conditions the right sort of man can accomplish results which no inexperienced man can possibly get. A well-conducted hospital must be as thoroughly organized as a well-conducted business establishment, and in order to do this the superintendent must be a man with large hospital experience, which point is demonstrated not only in the organization of patients to assist in the work, but in every other detail about the hospital.

Undoubtedly the time will soon come when all American hospitals will be standardized, and then in each instance the extent to which convalescent patient labor is utilized will play no small part in the rating given to the hospital. I believe that all good hospitals should have a well-organized "end result" or "follow-up" system applied to all patients who have left the hospital, which system can be easily kept in the form of a card index, and be very useful to the attending staff and in completing the records of the hospital. Such a system is bound to increase the efficiency of any hospital in a very marked way, and to carry out the routine work in connection with such a system in a large general hospital, or to assist in doing so, it is quite possible to utilize some of the best convalescent patients. The committees on the standardization of hospitals of the American Medical Association and of the American Hospital Association have already done some good work along this line, and it is to be hoped that this work will be continued.

The clothing of patients in a large public hospital is always a source of worry to the authorities, and of adverse comment by visitors, relatives, and friends of patients. It is my belief that a small tailor shop can be established in almost any hospital, and all clothing belonging to patients can be sterilized and afterward cleaned and put into a presentable appearance in this shop. The hospital clothing worn by patients can also be mended and kept in good order in the tailor shop. Convalescent patients can be made very useful in helping to do this work in the tailor shop; thus, at a very small expense, the appearance of the patients may be kept at a high standard, and the efficiency of the hospital increased at least in the eyes of the public. Such patients can also be used to great advantage in helping to keep the hospital grounds in a neat and tidy condition, and some employee should be regularly assigned to supervise this work and see that it is done. There is probably no other single problem in hospital administration that is more neglected than convalescent patient labor, and yet it is one of the most important ways of increasing the efficiency of the hospital.

If I may be allowed to digress a little from my subject, I will state that all hospitals should be standardized, and as a result the efficiency in charity hospitals in particular would almost necessarily be increased, and experienced men capable of getting results would be placed in charge of them. No great business corporation would think of putting a politician or totally inexperienced man at the head of one of its important departments. So, why should this very thing be tolerated in great municipal hospitals, and the sick poor made to suffer in consequence? If there is any place in the world where efficiency should be demanded, it is in hospitals that are caring for the sick, whether it be in the utilization of convalescent patient labor, or in taking advantage of any of the other multitudinous problems which are constantly confronting any hospital administrator.

NEW YORK HEALTH SERVICE BROADENS.

Department Has Arranged With Great Insurance Companies to Circulate Health Literature.

The New York Department of Health has just completed arrangements by which its service to the public can be greatly increased. The following announcement occurs in the weekly bulletin of the department:

In view of the mutual interests existing between the health authorities and life insurance companies in the promotion of public health, it is not surprising to find that these companies are very willing to cooperate cordially with this department in carrying on an extensive educational campaign among the people of this city.

The Department of Health has heretofore frequently found it difficult to quickly reach large numbers of people. Press bulletins cannot be relied on with certainty, as the newspapers frequently cannot find space to print them. Lectures, exhibitions, even moving pictures—all reach relatively small audiences. Circulars have been distributed through the schools, but this method has certain limitations.

After a conference with Dr. Lee K. Frankel, of the Metropolitan Life Insurance Company, and Mr. Edward Gray, of the Prudential Life Insurance Company, these companies have kindly placed the services of their agents at the disposal of the Department of Health for the distribution of public health literature. This means approximately three thousand agents visiting the homes of 750,000 families weekly. How important and valuable this cooperation will be can readily be imagined. The department seeks further cooperation along this line, and will be pleased to hear from organizations which are prepared to contribute assistance.

Dr. Harvey W. Wiley has been elected president of the board of directors of the Columbia Hospital for Women at Washington, D. C.

SEATTLE CHILDREN'S ORTHOPEDIC HOSPITAL.

A Splendid Philanthropy Built Up From Small Beginnings—Women Trustees Have Fine Business Organization—Some Interesting Features of the Service.

By MRS. ANN B. L. STEDMAN, Seattle, Vice-President.

THE Children's Orthopedic Hospital of Seattle is peculiar in the history of hospital management in that the administration of its affairs is governed in every particular by a board of trustees and officers composed wholly of women. Strange as it may seem, there has never been a dissension or disagreement in the seven years of the hospital's existence. The present superintendent and her assistant have been in charge for six years, and the chiefs of staff have been the same from the beginning. When asked by a Chicago surgeon how this could be possible, the orthopedist present and the superintendent agreed that everything reasonable had been done for their comfort and convenience, and there had been *no interference* by the trustees.

The hospital was founded in 1907. To test the need of orthopedic and surgical work for children in the Northwest, a ward in the Seattle General Hospital was secured through the cooperation of Miss Hall, the superintendent. At the end of a year the work had progressed so rapidly that it was necessary to build what was then called the fresh air house, a small one-story building with two porch wards and one house ward, whose total capacity was twelve beds. This small house became inadequate after two years' work. In 1911 the new hospital, with a capacity of 50 beds, was opened. In 1914 the waiting list demands enlargement of the new building. This brief history answers the question of the need of an orthopedic hospital in the Northwest. The nearest hospital of the kind is in St. Paul on the east and San Francisco on the south. Patients come to us from every northwest state, from British Columbia, and even from Alaska. This year brought an infantile paralysis case from Ipoh, Malay States. The eight-year-old son of a missionary was sent to us in charge of a Malay boy only fifteen years old. These two boys traveled the entire distance to Seattle, that the little patient might be in this hospital under one of our orthopedists.

The main exposure of the building is south. The frontage is 103 feet, and the depth is 46 feet. The building is of reinforced concrete, brick faced, and sanitary in every respect, even to a dressing incinerator in the dressing room. It is fireproof throughout; the walls and ceiling are hard plaster; the floors are cement—some left in natural, some covered with raecolith and some with battleship linoleum. Present arrangements provide four wards and three private rooms, operating room, surgeon's dressing room, x-ray room, plaster room, receiving room, drugs, sterilizing, six baths, eleven toilets, a diet kitchen on each floor, a main kitchen, nurses' dining room, housekeeper's and servants' quarters, ample store room, laundry completely equipped, and automatic electric elevator. The old fresh air house is being remodeled for a dental clinic and orthopedic gymnasium, and arrangements are on foot to establish a contagious ward. Particular stress is laid on the open air treatment furnished in this hospital, the mild winters and cool summers of Puget Sound making that a strong factor in the treatment of such cases as are brought to us.

Fig. 1. Children's Orthopedic Hospital, Seattle—East front.

The staff of surgeons and physicians is composed of the most eminent men within reach. There are four chief surgeons, each having one associate. Each chief and his associate serves three months at a time, making one service each year. The chiefs are appointed by the trustees, and the associates are suggested by the chiefs and appointed by the trustees. All serve without pay. Any reputable doctor can bring his own cases to the hospital as pay cases, either in the ward or private rooms. Patients are of three classes—full pay (either with own physician or

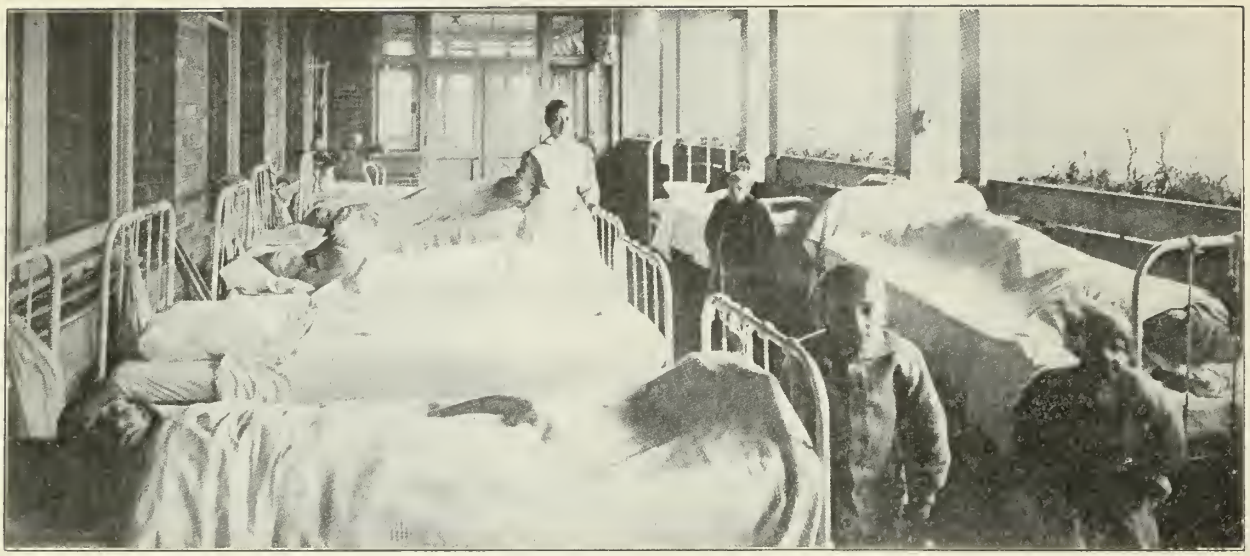

Fig. 2. Children's Orthopedic Hospital, Seattle—Open-air wards.

staff physician then on duty), part pay, and charity. The part pay and charity patients must be attended by the staff surgeon on duty at the time they enter. The charity patient always has precedence when space is limited, but an effort is made to ascertain the circumstances of the family to the end that parents are required to pay as much as they can afford for the care of their children, toward the running expenses of the hospital. In 1913 32 percent of running expenses was paid by patients; 68 percent was entirely gratuitous, and had to be defrayed from the resources of the hospital.

All patients, except full pay cases, must be examined in the receiving room, and, if admitted, spend a specified time in the observation ward before being transferred to the ward suitable to the age and condition of the child. The out-patient department is a large part of the work of this charity in that it cares for those who have been in-patients and for those who can be purely out-patients. The children come from such distances that the need for a convalescent house is keenly felt. Many who could be out-patients have to be retained in the hospital for treatment that could be given either in a convalescent home or as an out-patient. The regular morning for new patients is Tuesday, when a chief or staff is present at 11 a. m. to examine new cases. The doctors carry over cases that have entered the hospital during their term of service, and many have private cases; so, in order to care for all, each doctor has his own morning other than the regular Tuesday service. The number of children treated in this department during 1913 was 950; number of plaster casts made, 425.

The nursing force the past year (1913) has consisted of three graduate nurses and five pupil nurses. These latter have three months in the orthopedic during their senior year in hospitals

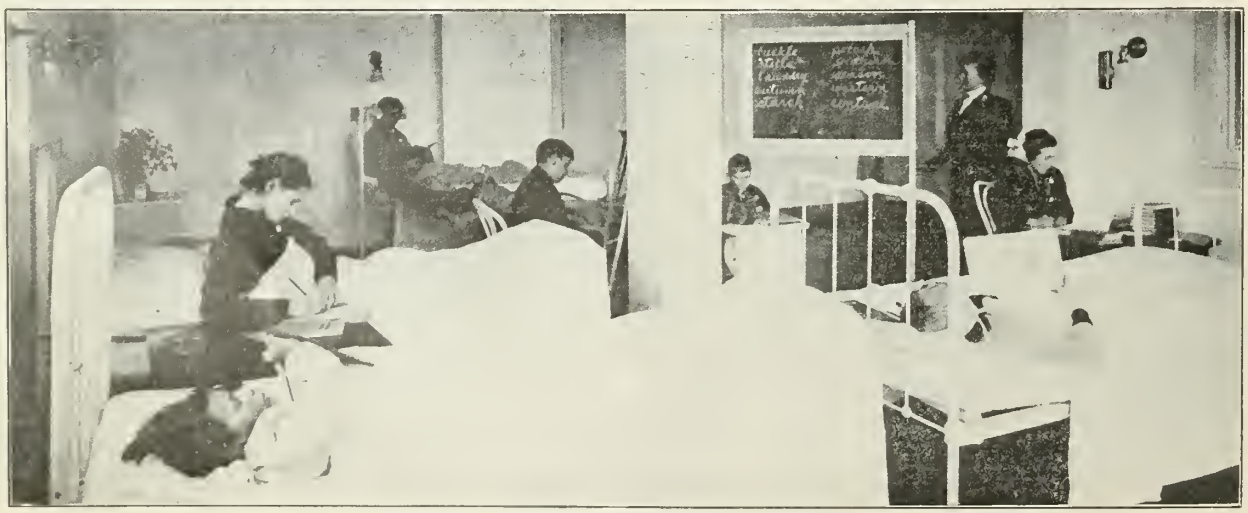

Fig. 3. Children's Orthopedic Hospital, Seattle—The school.

that affiliate with the orthopedic. Each year the number of children applying increases so rapidly that the force of nurses is constantly being increased and special nurses employed.

Each department of the hospital is under the care of a committee of women, one or more of whom is a trustee. The investigating committee looks into the circumstances of the family, the condition and treatment of the child before he comes to the hospital, and, when necessary, after he returns to his home. The hospital committee assists the superintendent in keeping up the surgical supplies, consults with doctors and nurses in regard to children under treatment, and also arranges matters pertaining to selection and disposition of nurses. The house committee has charge of all household furnishings and the renewing of household supplies, clothing, etc. The ways and means committee investigates all schemes presented for the raising of funds, and, in consultation with an advisory board of bankers and business men, invests the money of the hospital, and has charge of any special affair for procuring money. The buildings and grounds committee attends to all repairs and alterations of the hospital building and buildings belonging to the association, and the upkeep of grounds and property in general.

A unique and successful feature of the hospital work is the dividing of the city into districts, each district having a guild of women workers who are members of the hospital association. These guilds work independently of each other, have their own officers, and dispose of their money for any hospital need they may select. A favorite object is the support of one bed for a specified time, usually a year, paying a fixed sum and naming the bed for the time specified. There are a number of beds so named and supported in the hospital, and the guild or person that contributes in this manner feels a particular interest in the occupant of the bed, continuing this interest after cure or transfer to out-patient department.

A meeting of the officers of various guilds is held once a month, when a resume of the month's work at the hospital is presented to them, together with a list of requisitions from the superintendent. The representative of each guild selects from this list some article needed and sends it to the hospital during the following month. In this way interest is stimulated and the needs of the hospital supplied. One guild makes all the bed gowns used by the children, which is quite a task since the new building was opened.

The support of the Children's Orthopedic Hospital comes from many sources—memberships, special donations, patients' fees, and interest on endowments. The response to the call of the crippled child is every ready from most unexpected quarters. A poor man, crippled from childhood, with no such hospital as ours to straighten his back when he was an infant, collects money, a few pennies at a time, from friends equally poor as he, bringing to the hospital every now and again a few dollars to help some boy attain a more equal footing with his fellows. This same crippled man each year plucks his geese and brings one or two fine pillows to the hospital as his own offering. In the autumn he makes apple jelly for us, keeping ever in mind the saving of some child from the lifetime of suffering that he has had to endure. What billionaire can approach such giving as this!

Fig. 4. Children's Orthopedic Hospital, Seattle—The kindergarten.

We have no state, county, or city assistance. The hospital is a private charity. Children have come to us from state institutions, but they have been charity cases, with no pay to us from the institutions from which they came.

Not only orthopedic and general surgeons give of their time and skill, but also the eye, ear, throat, and nose specialists, neurologist, radiologist, and dentists, so that when a child leaves the Children's Orthopedic Hospital of Seattle he has

had attention from the best specialists and every defect has been remedied that could be corrected, and his general health has been thoroughly built up.

Since the beginning of the work in 1907, 1,004 cases have applied for admission. Of this number, 153 have been refused for reasons stipulated in our rules, and 851 have been accepted.

All money given for the crippled children goes directly to their care, the only salary outside of the running of the hospital being $15 a month to a bookkeeper. All work in connection with the duties of treasurer, secretary, etc., is done by women whose hands as well as hearts are at the service of this charity.

For the little children we provide a kindergarten. The older children are taught by a public school teacher of long experience, who gives them all the advantages they would receive were they able to attend the grade schools. A manual training department is about to be installed. Sunday-school lessons are provided and taught by willing workers, and a story-telling hour every week is looked forward to eagerly by every child in the hospital. For those who are very ill a special little story is told at the bedside.

Sunshine and happiness are the keynotes of our work—sunshine from the wonderful climate of the Puget Sound country, as well as from the joy of making straight the deformed and giving relief from pain; happiness in giving the child a future of usefulness and pleasure where before he had little to anticipate beyond being a public charge full of unsightly agony. The orthopedic smile is a byword in the hospital, asking, in the words of an eminent minister interested in the work, "Help me NOW, that I may become a self-sustaining citizen."

SURGICAL OPERATIONS AND SURGICAL DRESSINGS AT THE JOHNS HOPKINS HOSPITAL.[1]

All Assistants at Operations Are Physicians—Two Nurses Always Present—Surgical Supplies Kept and Sterilization Done at Central Point=Simplicity of Tables and Furnishings.

By RALPH B. SEEM, M. D., Assistant Superintendent.

MAJOR operations are performed in three departments of the hospital—the general surgical, the gynecological, and the obstetrical. As there is similarity of procedure in all three departments, the method followed in the general surgical service will be described in detail and differences in the other services will be noted.

All patients on the surgical service are seen within twenty-four hours after admission by the resident surgeon or his assistant, who examines them and makes a note on the history, describing in detail the surgical conditions found. Emergency cases on admission are taken at once to one of the operating rooms. Other cases, admitted at hours when the surgical staff is busy, are given a bath and put to bed. If the nurse thinks a patient needs attention, she telephones to the head nurse of the operating room to have a doctor sent at once to the ward.

After the rounds have been made, the resident surgeon and his assistant make up a schedule of operations for the following day.

The patients are ordered for operation by the resident surgeon or his assistant. The routine orders for preparing a patient for operation are a soap suds enema to be given early in the morning and that breakfast be omitted. The orders are signed by the resident or his assistant, and all nurses are instructed not to carry out any order which has not been signed by a member of the staff.

When a patient is to be brought to the operating room, the head nurse in the ward is notified by the nurse in charge of the operating room. A nurse from the ward takes the patient to the operating floor, either in a wheel chair, or the patient may walk if he prefers to do so and his condition warrants it. If the patient requires the use of a stretcher, an operating room orderly takes a stretcher to the ward for the patient. With the patient is sent his chart and history, in which is recorded a complete physical examination, a note on the surgical condition, a urinalysis, and any other examination which a particular case might indicate.

On arriving on the operating floor the patient is taken into the anesthetizing room, where he is undressed and an operating jacket is put on him. He is placed on a wheel stretcher and is given the regulation hypodermic injection of morphia .1 grain and atropin .01 grain by the nurse in charge of the anesthetizing room. The field of operation is then dry shaved by an orderly, or by the doctor if the patient is a woman. It is then explained to the patient that the duration of the anesthesia can be shortened by completing the

[1]This is the eighth paper in the series on Internal Administration at Johns Hopkins Hospital; last month, "Purchase and Distribution of Medical and Surgical Supplies."

preparations on the operating table before starting the anesthetic. If the patient does not object, this procedure is followed. The field of operation is then prepared by one of the surgeons, who has cleaned up to assist. He applies Churchill's tincture of iodin and places sterile covers on the patient. The anesthesia is then started.

All anesthetics are given by a trained anesthetist, or under his direction. The anesthetic used and the method of anesthetizing varies with the condition of the patient and the character of the operation. The combination of nitrous oxid, ether, and oxygen is employed in many cases. In operations on the breast and on the thyroid gland nitrous oxid gas is given throughout the operation. The anesthetist keeps a chart, on which he records the patient's pulse rate, the duration of the anesthesia, and the kind and amount of anesthetic used. In special cases the blood pressure is also recorded.

When operating on a patient in which the diagnosis of the case is doubtful, a microscopic examination of a frozen section of the tissue is made in a few minutes by one of the surgeons. His report often determines the character of the operation to be performed.

When the operation has been completed, the patient is transferred from the operating table to a bed that has been wheeled into the operating room from the recovery room. A doctor goes with the patient to the recovery room, and leaves any orders that may be necessary with the nurse in charge. Later, when the patient has recovered sufficiently from the effects of the anesthetic, he is taken to the ward in the recovery room bed by an orderly from the operating room, accompanied by one of the doctors, who leaves orders for the patient with the ward nurse who receives him.

In the general surgical operating suite there are three operating rooms and the accessories—an anesthetizing room, examining rooms, and dressing rooms—and also a supply room and a recovery room.

The force consists of a graduate nurse in charge, an assistant, who is also a graduate, six pupil nurses, and two orderlies. In their senior year the nurses spend a period of three months between the general surgical and gynecological operating rooms.

In the supply room is stored a standard amount of sterile and unsterile dressings and surgical supplies of all kinds—catgut, needles, hypodermic syringes, etc.—which are in constant demand. These dressings—pads, bandages, sponges, etc.—are prepared by the nursing staff, and the supplies are kept in working order and up to the standard quantities by them under the direction of the head nurse. The dressings are not sterilized here, but sent to the general surgical supply room for sterilization by an orderly, who has special charge of this work. In this way serious accidents with the sterilizers are much less likely to occur than when they are operated by inexperienced nurses. Raw catgut is prepared by the nurse in charge, because the technic must be perfect, and the work should not be left to the care of a pupil nurse.

Two nurses are present during each operation. One nurse cleans up and looks after the sponges, dressings, etc., and the other acts as general utility nurse, getting special instruments that may be needed, or performing any one of a number of small services needed by one of the operating staff. Four doctors clean up for each

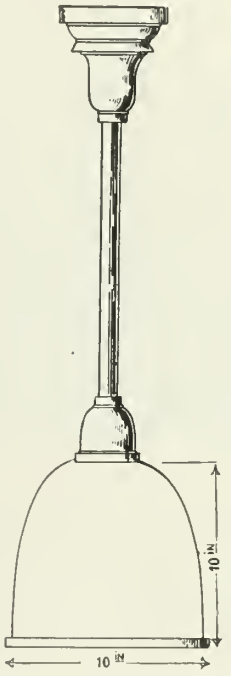

Fig. 1. Light in the general operating room—250-watt Mazda lamp.

operation—the operator, two assistants, and the instrument man. In cleaning up for operation, the hands and forearms are thoroughly scrubbed with a fiber brush in hot soap and water. The disinfecting solutions used for hand sterilization vary somewhat with the preference of the surgeon. The methods employed are as follows:

1. After the hands have been scrubbed, they are immersed in a saturated solution of potassium permanganate and kept there until they are stained a mahogany brown color. They are next transferred to a saturated solution of oxalic acid until the stain is removed. The hands and forearms are then soaked in a bichlorid solution (1-1,000), and finally rinsed in salt solution, in which the gloves are put on.

2. The hands and arms are washed as above and then soaked in 70 percent alcohol for five minutes. The gloves are put on in sterile water or salt solution.

The instrument man selects the instruments for each operation, attends to their sterilization, and "hands instruments" as they are needed to the operators. The instruments are cleaned by the nurses. Each day the assistant nurse in charge looks over the instruments which have been used, to see whether they need to be repaired or sharpened, or replaced.

Except in emergency cases, all operations are scheduled for the morning hours. In order to avoid confusion, a schedule has been adopted which states the days and hours that the operating rooms may be used by different members of the surgical staff. The three operating rooms are often in use at the same time.

When artificial illumination is required to light the field of operation, a comparatively simple fixture has been found to be very satisfactory. The light, which is a 250-watt Mazda lamp, is suspended over the operating table 7 feet above the floor.

The beds in the recovery room are mounted on bicycle wheels, 12 inches in diameter. The wheels turn on swivels, and are so placed that they do not project beyond the ends of the bed.

The gynecological operating suite consists of an operating room, with the usual accessories, and a cystoscopic room. Operations are performed with the aid of reflected light. A Koenig's light casts its rays on a mirror, which reflects the light on the operating table. The mirror is suspended from the ceiling in such a manner that the angle of reflection may be changed. This light has been found a distinct advantage in lighting the field of operation, especially in pelvic work.

The nurse in charge is a graduate, with three pupil nurses to assist her in the work, and also an orderly. Five doctors clean up for operation—the operator, two assistants, the man who hands instruments, and the "sponge man." Two nurses are constantly present in the operating room.

In this service the routine hypodermic injection of morphia ⅙ grain and atropin 1/120 grain is given in the ward before the patient leaves for the operating room. Nitrous oxid, followed by ether, is the anesthetic used in all abdominal cases. After the patient has been anesthetized, one of the surgeons applies 70-percent alcohol and shaves the abdomen. The perineum is then shaved. Soap and water is used, followed by a 1-1,000 solution of bichlorid and 70-percent alcohol. The vagina is then cleaned in the same

THE JOHNS HOPKINS HOSPITAL.

DAILY ORDERS—SURGICAL SUPPLIES.

Ward..... Date.....

Gauze, wide .....
narrow .....
pads .....
Bismuth drains, wide .....
narrow .....
in tubes .....
Iodoform drains, wide .....
narrow .....
in tubes .....
Cotton pads .....
Handkerchiefs .....
Old linen .....
Sponges .....
Silver foil, large.....
small .....
Squares for instruments .....
infusion bottles .....
Towels, dressing .....
sterile pks. .....
G. U. .....
Abdominal gauze .....
cotton .....
Perineal pads .....
Pledgets .....

Fig. 2. Daily requisition form. Actual size, 5x6 inches.

THE JOHNS HOPKINS HOSPITAL.

WEEKLY REQUISITIONS—SURGICAL SUPPLY ROOM.

Ward..... Date.....

Bandages, gauze, 6-in.	Gloves, heavy
4-in.	medium
3-in.	sponge
muslin, 6-in.	thin
4-in.	tub
3-in.	Gauze, absorbent
Binders, surgical	bandage
T	Mouth gags
scultetus	Muslin, bandage
Buckles	oil
Bobbin	Needles, intestinal, No. 9
Bottles, infusion	No. 6
Cement, rubber	Reels, glass, Halsted
Cotton, absorbent	spool
common	Silver foil
sheet	Splints, approximation
Covers, broom	board
chloroform inhaler	coaptation
Hampton pad	Silk, black
table	white, braided
tray	spool
Compresses	Sea sponges
Crinolin, bandage	Slings
plaster	Stupes
Crepe lisse	Silkworm gut, black
Crayon	white
Cheese cloth	Surgeons' lint
Dusters	Specimen jars
Door pads	Tubing
Damask	Tape measures, large
Extensions, cord	small
spreaders	Wash cloth
soles	Webbing
Flannel	Wire, picture
Finger stalls	

Fig. 3. Weekly requisition form. Actual size, 7x11 inches.

manner and the patient is catheterized. When the patient has been placed on the operating table, a 3½-percent solution of Churchill's tincture of iodin is applied to the whole abdomen. This is followed by a 7-percent solution of the same applied only to the field of operation. After the operation the patient is taken at once to the ward by an orderly, accompanied by one of the doctors.

Fig. 4. Operating table in the general operating room. (These tables are shown because of their simplicity.)

In the obstetrical service the operating room is in connection with the maternity ward. The ward nurses make up all supplies and dressings used in this department, look after the operating room, and attend operations, most of which are on emergency cases.

Fig. 5. Same table as used for genitourinary work.

Chloroform is the anesthetic used. When anesthesia is continued for a period longer than twenty minutes, the anesthetic is changed from chloroform to ether.

The vagina is not cleaned up in maternity patients, but in other respects the preparations before operations are practically the same as in the gynecological operating room.

The surgical supply room is in charge of one of the assistants to the superintendent of nurses. From six to eight probationer nurses are assigned for duty here. In addition, there is a maid who stretches the washed gauze, and an orderly in charge of the sterilizers.

In this department are stored the surgical supplies used throughout the hospital. All of the dressings used in the wards and some special dressings used in the operating rooms and dispensary are made up and sterilized here. Dressings made up in other parts of the hospital are sent here to be sterilized. A nurse packs the dressings into the sterilizer and controls the length of time the materials are to be sterilized and the degree of pressure obtained.

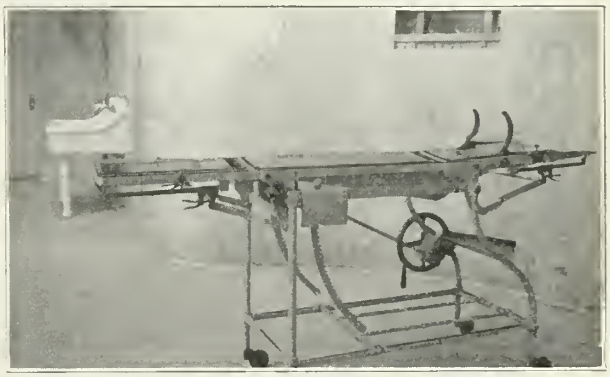

Fig. 6. Gynecological operating table.

These supplies and dressings are ordered on daily and on weekly requisitions. Nurses are sent by the three surgical departments to the supply room for the supplies issued on *daily* requisitions. The supplies ordered on *weekly* requisitions are delivered by the orderly from the supply room.

The dressings most commonly used are made up as follows:

Wide gauze.—Cut in 3-yard lengths; fold lengthwise twice and roll evenly. Two rolls in each package. (Used in dressing breast cases.)

Narrow gauze.—1 yard 28 inches long (4 inches cut off end of fold and used for sponges). Fold lengthwise three times and roll evenly. Two rolls in each package. (Used in dressing breast cases and head cases.)

Gauze pads.—1 yard 28 inches long. (Cut as narrow gauze.) Fold crosswise once, then lengthwise once, then crosswise into three, with raw edges in. Then plait into four even folds. When finished should be 10 inches wide. Two pads in each package. (Used as abdominal dressings.)

Cotton pads.—22 to 24 pads are made from common cotton, rolls, 1; absorbent cotton, rolls, ¼; gauze, yards, 8. How made: common cotton, ordinary thickness; absorbent cotton, ¼ or ⅛-inch thickness; gauze for each pad 12 inches wide, 32 inches long, cut lengthwise. Place cotton flat on table, cover with absorbent layer, cut 7x13 inches. Cover with gauze. Plait in three folds; 3 pads in package. (Used for drainage cases.)

Handkerchiefs.—Cut 18x14 inches. Four from each yard of gauze. (Sponges cut from double fold as in narrow gauze.) Ten in package.

Sponges.—Made from strips saved from above and cut in half, or from new gauze when necessary. Twelve sponges 9x12 inches from each yard. Turn in cut edges. Roll over fingers and tuck in end. Fifteen in each package.

Abdominal gauze.—Cut 12x36 inches lengthwise of gauze. Fold in half crosswise. Cut edges folded in 1 inch at both sides. Fold ends in 4 inches twice, making pad 10 inches long and 4 inches wide. Six in package.

Abdominal cotton.—Absorbent cotton one-half original thickness. Cut in 12-inch lengths. Plait in three folds. Two pads in each package.

Pledgets.—Absorbent cotton roll, one-half to each bag.

Perineal pads.—56 to 60 pads are made from common cotton rolls, 1; absorbent cotton rolls. ¼ or ⅛; gauze, yards, 15. Spread cotton as for cotton pads. Cut in 10-inch blocks, each block cut in 4 lengthwise, so that pads are 10 inches long. Gauze for each pad width 9x24 inches, cut lengthwise of gauze.

Delivery pads.—30x24 inches. Foundation muslin. 1, layer of muslin bandage ends and waste washed gauze (pieces too small to be used for dressings); 2, layer of picked cotton; 3, cover of bandage gauze; muslin foundation and gauze sewed together around from side; then the whole pad quilted here and there to maintain uniform thickness; sterilized; after use sent to laundry, washed, returned to surgical supply room, contents removed, used for making picked cotton, old foundation of muslin and cover of bandage gauze refilled, and used again and again until worn out.

Bismuth and iodoform gauze.—Into 6 ounces of lukewarm normal salt solution dissolve enough castile soap to make the solution slightly cloudy. Gradually pour this solution into 10 ounces of bismuth or iodoform. The resulting liquid must be a uniform mixture. If it becomes curdled, it is useless. The gauze is then thoroughly saturated with this solution and made up as follows:

Bismuth and iodoform, wide.—Cut ¾ yard long, 4 inches wide, cut edges folded in. Strip then folded crosswise in half and rolled from open end; 2 inches wide when finished. Amount of gauze required for twelve pieces, 1⅛ yards. Put up in packages of six in muslin, two in each.

Bismuth and iodoform, narrow.—Made in same way, except drain is 1 inch wide. Gauze needed, ¾ of a yard for twelve pieces.

Bismuth and iodoform, in tubes.—Cut 12 inches long, 2 inches wide. Cut edges each folded in ½ inch, then fold lengthwise. When finished, ½ inch wide. Gauze needed, 8 inches for twelve pieces.

Sterilize under 7 pounds pressure of steam for twenty minutes.

In making dressings the grades of materials used are as follows: unbleached muslin, known by the trade names of Brandon Mills B.B. sheeting, and Plaza L.L. sheeting is used for bandages. Dressing gauze, bleached, has a thread count of 20x12. Bandage gauze, bleached, has a thread count of 32x26.

Three kinds of cotton are used—standard grade absorbent cotton; common cotton, known by the trade name of Clyde batts; and picked cotton, which is made from pieces of washed gauze which are not suitable to be made into dressings or bandages.

THE AMERICAN HOSPITAL ASSOCIATION.

An Urgent Reminder of the Convention to Members and Others Who Should Be Interested.

Dr. H. A. Boyce, the energetic secretary of the American Hospital Association, has just issued the following urgent appeal to the members of the association and others who should be interested in the important program to be presented at the coming convention:

This is to remind you of the great convention of the American Hospital Association to be held at St. Paul on August 25 to 28, inclusive. Let us unite to make this meeting the greatest in the history of the association.

Read the program and be convinced that it is one of the best ever issued. Problems, difficult and complex, will be discussed by able hospital administrators. Much time will be given to the discussion of matters relating to the small hospital. Each institution, large or small, should have its representatives at the meeting.

No member can afford to miss this opportunity of improving his knowledge of subjects so vital to successful hospital work. Tell your friends about the St. Paul meeting. Get them to join the association and bring them along with you.

The list of members is increasing daily. Already over 200 have joined. Have you sent in the name of one new member this year? If not, why not do it now? Have him sign an application blank and return it to the Secretary, Kingston, Ont., at once. Tomorrow never comes. Do it now.

We desire to express sincere thanks to those who from time to time have sent in the names of new members. We trust they may continue the good work.

Now is the time to decide that you will attend the St. Paul convention. Write Mr. Bacon and make your reservation on the Association's special train which leaves Chicago August 23. Come along and enjoy a daylight trip along the beautiful valley of the Mississippi River.

Remember the place, remember the date, remember to come.

H. A. Boyce, Secretary,
Kingston, Canada.

THE UNITED STATES NAVAL HOSPITALS IN AMERICAN SAMOA.

A Modern Hospital and Dispensary Have Been Built and Are Administered for Americans and Natives—The Work Is Thoroughly Systematized—Description of the Hospitals.

By EDWARD U. REID,
PASSED ASSISTANT SURGEON, UNITED STATES NAVY.

AMERICAN Samoa consists of five islands located south of the equator and midway between the Hawaian Islands and Australia. The population numbered 7,251 at the census of 1912. Of this number, 6,659 were Samoans, 121 Pacific Islanders from other groups, 292 castes, and 179 whites. About 6,000 live on the island of Tutuila, which has a large land-locked harbor, one of the best in the South Pacific. The Samoans are a well-developed, but rather indolent, people and belong to the Polynesian race. The United States maintains a coaling station and a station ship at Tutuila, with a personnel of about 120 whites and 80 Samoans (band and native guard).

During the year 1911 a new naval dispensary and sick quarters was completed for care of the naval personnel, and a Samoan hospital was begun for the treatment of the native population. These establishments are located about half a mile apart, and are both under the management of the senior medical officer, who is also health officer of American Samoa.

The naval dispensary and sick quarters is located on the shore of the bay at the foot of a knoll, on which is the governor's residence. The central building contains one ward of 16 beds, one private room, three rooms for members of the hospital corps, a dispensary, and two offices. The

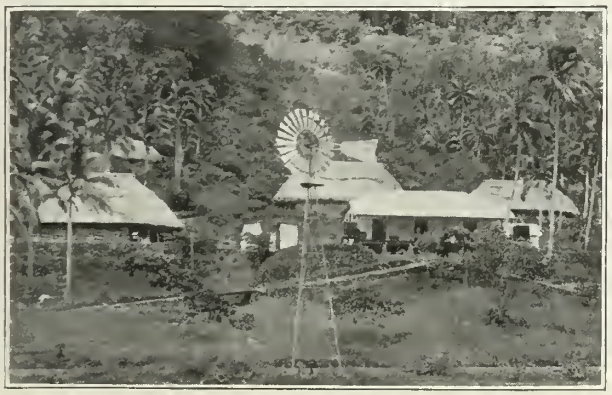

Fig. 1. American Samoa—Naval hospital.

rooms all open by French windows on the wide surrounding veranda. A small annex on the east end contains operating, instrument, and sterilizing rooms; another annex furnishes bathing and toilet facilities; a large annex on the north contains kitchen, pantry, store room, and mess rooms, and, on the west end, dressing room, examining room, dark room for eye, ear, nose, and throat work; a dental office and a large, well-equipped laboratory are provided in another annex. Two small separate buildings provide a store room and a dark room for photographic work.

The buildings are of wood, raised about 3½ feet above the ground on concrete pillars. They are cool and well ventilated, as is necessary in the tropics, the operating annex being the only ex-

Fig. 2. American Samoa—Naval dispensary and sick quarters.

ception. This building is small, and comfort has been sacrificed for better lighting.

This establishment, with occasional use of tents for isolation purposes, furnishes ample facilities for the care of the white population and for research work.

A hospital steward, a hospital apprentice (first-class), and two hospital apprentices (Samoan) formed the small, but efficient, staff during my tour of duty (September, 1911, to May, 1913).

Prior to March 4, 1912, the Samoan sick were treated in the old naval dispensary. On that date the patients and material necessary for their care were moved to the Samoan hospital. This establishment is located on government land, west of the naval station, and consists of a central frame building of three rooms, erected by the island government, and three large and three small Samoan houses, one of each erected by each of the three districts of American Samoa. The central building contains a dressing room (20 by 20 feet), a dispensary and laboratory (10 by 20 feet), and an examining room (15 by 20 feet). A 12-foot veranda extends the length of the front (45 feet), and a kitchen annex and a store room are located in the rear. The Samoan houses are used as wards. The large houses are 28 by 60 feet and the small ones 20 by 32 feet. They are well con-

structed, with thatched roofs and concrete floors. This style of building is cool, well ventilated and easily cleaned.

An operating room 16 feet square was completed in January, 1913, near the western end of the central building. It has four windows (3½ by 7 feet), an amber skylight (6 by 4 feet), and a concrete floor with tile border. It is light, cool, and very well suited to this climate, and was erected at moderate expense. Material and equipment were purchased from the Samoan hospital fund and labor was supplied by the island government.

Fresh water is collected from the corrugated iron roofs of the central building and the operating room in four 400-gallon tanks, and supplied over the dispensary sink and the dressing room and operating room washstands. Salt water for bathing and flushing purposes is pumped by windmill from the bay into a 10,000-gallon tank back of the main buildings, and is connected with three showers, a sanitary closet (for hospital attendants), an automatically flushing closet of four seats (for patients), and a fire hose. Fresh water has more recently been piped from a spring far up on the hillside to the 10,000-gallon tank, so plenty of fresh water is now available during most of the year for all purposes.

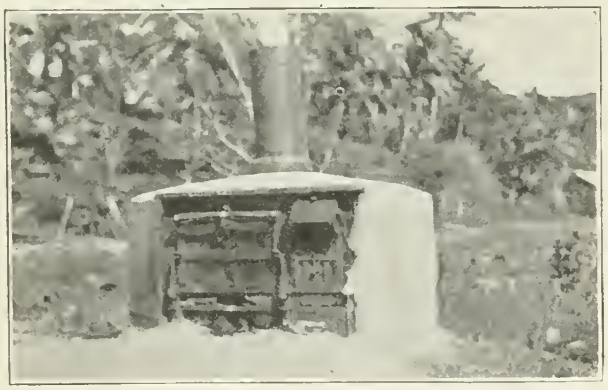

Fig. 3. American Samoa—Improvised incinerator.

Garbage is collected in covered metal cans, and burned in a very efficient little incinerator, constructed from a condemned stove, covered with cement and provided with a section of tile pipe for a flue. A few fire bricks and a piece of old grate set on them in the oven leave ample room for fuel and garbage. A good draft was insured by facing the stove toward the prevailing wind and admitting air under the oven door.

The buildings and roads are lighted by electricity from the station power plant. Road making, ditching, bridge building, grading, and general care of the grounds involved a great amount of labor in addition to that necessary for proper care of the sick. Trees have been planted, and a dozen royal palm fronds were obtained from Honolulu for further improvement of the grounds.

A hospital apprentice (first-class) was in charge at this hospital during most of my stay in Samoa. The sanitary inspector of the islands (a hospital steward) also helped with the work when not away from the station on inspecting tours. Two to three male nurses (Samoan boys apprenticed for training); one female nurse (caste), and a janitor or caretaker were employed during this time. With this small staff a great amount of work was performed.

During the year 1912, 320 cases were admitted, with a daily average of 14.3 patients. Four clinics a week were held, and 2,944 examinations and treatments were recorded for the year. Fifteen deaths occurred in the hospital during the year, several of the patients having been admitted in a dying condition. Among the cases treated were the following: ascariasis, 265; yaws, 154; uncinariasis, 143; tuberculosis, 124. Salvarsan was administered to 107 cases of yaws by the intermuscular method, with most excellent results, and 5,493 surgical dressings were applied during the year.

Case papers, clinical charts, and clinic cards were used. Each clinic case came to the medical officer with a small card bearing the date, name, age, sex, and village, and blank spaces for diagnosis, treatment, and charge, which were filled in by the medical officer. After the treatments were given the cards were filed alphabetically. A journal, a cash book, an account book, a record of supplies and property, and a book for recording operations and laboratory examinations were also maintained. All expenditures were made from the Samoan Hospital Fund on vouchers approved by the governor. This fund was obtained by nominal charges for operations ($5 to $25), treatment in the hospital (25 cents a day), examining and prescribing (10 cents), etc.

During the year 222 operations were performed, 114 being under general anesthesia. The most numerous were for abscesses, usually of filarial origin. Two operations for carcinoma, 29 for elephantiasis, and numerous gynecological operations were included in the list.

Miss Laura R. Logan, for the last three years superintendent of Hope Hospital, Fort Wayne, Ind., has accepted an appointment to become superintendent of nurses in the training school of the new Connecticut General Hospital. Miss Logan has degrees from several schools of high standing in Canada and New York City. She has had a varied experience in hospital work, and was very highly recommended to Superintendent Sanborn, of the Cincinnati institution. The vacancy at Hope Hospital will be filled temporarily by Miss Elizabeth Springer, who was Miss Logan's assistant.

THE BOARD, STAFF, AND SPECIAL DEPARTMENTS OF A SMALL HOSPITAL.[1]

Why Staff Men Are Not on the Board—The Medical Staff—Managing the Finances—System of Records—Conduct of the X-Ray, Hydrotherapeutic, and Pathologic Departments.

By ELIZABETH A. GREENER,
SUPERINTENDENT OF HACKLEY HOSPITAL, MUSKEGON, MICH.

PAPER VIII.

HACKLEY Hospital is controlled and governed by a board of nine trustees, all of whom are laymen. There are no women on the governing board, nor are there any auxiliary committees, our generous endowment enabling us to meet expenses without the outside aid which is generally so essential to the small hospital.

When the hospital was first organized, two of the nine trustees appointed were physicians of high standing in the community. It was found, however, that, while these two members of the staff formed a most valuable addition to the board, having them there was not conducive to harmony with the other members of the staff. The matter resulted in the resignation of the two physicians, who were unwilling to be the cause of any jealousy or friction, and the appointment of two laymen in their places.

Our staff organization is large and includes most of the physicians in good standing in the city. It includes both allopathists and homeopathists. There are eight regular departments—two medical, allopathic, homeopathic, surgical-gynecological, obstetrical-pediatrics, roentgenology, and pathology.

The board of trustees and the staff are closely associated by reason of the fact that the appointments as chief of staff and heads of departments are made by the board. New members of the staff are also appointed by the board, but only on recommendation from the staff for such additions as they consider desirable.

The chief of staff and the eight physicians at the heads of departments constitute what is known as the doctors' committee. Any special communications from the staff are made through this committee, and joint meetings of the board and staff are held when matters of importance to the hospital are to be considered.

The board of trustees holds meetings on the second Monday of each month for the transaction of general or special business, and for the consideration of the monthly report of the hospital and of its various committees.

There are three standing committees appointed from the board—the executive committee, composed of the president of the board, the vice-president, and secretary; the finance committee; and a committee on buildings and grounds.

It has not been found necessary to appoint a special training school committee because the executive committee meets with the superintendent each week for the discussion of general business and to pass on bills and free bed applications. Any matters of importance pertaining to the training school are considered by this committee, and, if necessary, referred to the board for official action.

Our hospital year begins May 1. The annual meeting is held during this month. At this time the reports of all hospital work and transactions for the past year are presented, officers of the board are elected, and at the next regular meeting of the board the chief of staff and heads of departments are appointed. These appointments usually carry over for the second year.

We have no hard-and-fast rules as to visiting hours for attending physicians, or hours for operating. In the small hospital with a large staff this matter is one difficult of regulation. Generally speaking, however, our staff make their hospital visits from 8 to 10:30 each morning and from 4 to 6 each afternoon.

We have but one resident intern. It is, of course, out of the question for him to make rounds with more than a few doctors each day. His practice is to go with the first doctor registering at the hospital, and to see as many others as possible as they call. When physicians are desirous of having his attendance for special reasons, he is notified to that effect from the general office.

Each physician registers immediately on arrival at the hospital, noting hour of arrival, and also notes the hour of departure when leaving. In this way it can be readily ascertained whether he is in the hospital when wanted. Physicians receiving calls of importance or hurry calls are immediately located and notified, a house telephone system from the general office making this a simple matter. Other calls are noted, and the message left in the registry room where the doctor finds it before leaving.

The head nurse or senior always accompanies

[1]This is the eighth and last of the series of papers on the internal administration of a small hospital. Last month, "Purchase and Dispensing of Hospital Supplies and Drugs."

physicians when making hospital rounds. Each doctor writes his own orders in a book provided for that purpose in the nurses' charting room. If a doctor issues verbal orders, he is held responsible for any mistake which may occur in executing them, as the nurses are supposed to have all orders in writing. Should there be any question as to the interpretation of a written order, it is referred to the house surgeon, who decides the matter, or, if in doubt, calls the doctor who left the order.

Physicians of good standing in the community are allowed by courtesy of the staff to send their cases into the hospital and to treat them there. The use of the operating room, however, is only permitted with the understanding that some regular member of the staff must be present to direct or assist at the operation.

Except for emergencies or out-of-town cases, the greater part of our operating room work is done in the morning. No operations, except emergencies, are ever performed at night or on Sundays. Surgeons wishing to operate notify the general office concerning operations, and all necessary arrangements are made there for the use of the operating room, and any other details, such as special nurses, rooms, etc. The surgeon who first notifies the office of operation has the choice of hours—the morning being divided into two periods—from 7:45 to 10 and from 10 to 12.

Each patient, as admitted, is given a number, and all hospital records, charts, cards, etc., are kept under this number in addition to bearing patient's name.

A complete record of all operations performed and of all obstetrical cases is kept in the general office. Each surgeon writes up his operation, or gives the surgical nurse the data for doing so, before leaving the operating room. This is noted on a special operative record sheet. These records are sent from the operating room to the office each day after the operations are finished for the day, and the official record is taken from them, after which they are returned to the ward, to be kept with the charts. Obstetrical cases are reported in the same manner by the head nurse. These records, which are kept with the greatest accuracy, form the basis for monthly and yearly reports showing the work of the hospital. We also keep an alphabetical list of diagnoses, operations, and patients' names, using the card index system for all such records and also for patients' accounts.

Our bookkeeping system is rather a simple one. All bills received are attached to hospital vouchers by the bookkeeper, and are verified by sending to heads of departments, who are responsible for the quality and condition of all goods received in their respective departments; they in turn check these monthly statements over with daily slips or shipping invoices received with goods. If these bills prove correct, they initial them and return them to the bookkeeper, who verifies the extensions. They are then approved and signed by the executive committee and the superintendent.

HACKLEY HOSPITAL

Bill No..... Dated.....

ACCOUNT OF

.....

I certify the within account to be correct.

..... Superintendent.

Authorized and approved by.....Committee.

..... Chairman.

Audited by Finance Committee and ordered paid.

..... Chairman.

Paid.....by Check No.....

CHARGED ACCOUNTS AS BELOW:

1	Ambulance			14	Laboratory		
2	Buildings			15	Lighting		
3	Drugs			16	Nurses' home		
4	Fuel			17	Nurses' text books		
5	Furniture and furnishings			18	Nurses' uniforms		
6	Grounds			19	Office expense		
7	Ice			20	Repairs, building		
8	Incidentals			21	Repairs, sundry		
9	Instruments and appliances			22	Salaries and pay roll		
10	Kitchen equipment			23	Sundries		
11	Kitchen supplies			24	Surgical supplies		
12	Laundry equipment			25	Table furnishings		
13	Laundry supplies			26			
H	Hospital supplies			27	Bedding, linen, etc.		

Voucher No.....for $.....

Fig. 1. Voucher form.

The vouchers are then recorded in the voucher book and presented to the finance committee for approval, after which checks are drawn for same. All bills are paid by check, except small items of less than $1, which are charged to a petty cash account and put in voucher form when $20 have been spent. All vouchers are filed away numerically after checks have been sent.

Journal entries are made up from the voucher book and transferred to the ledger under the headings shown on the voucher form. The regular trial balance sheet is made out each month.

SPECIAL DEPARTMENTS.

We have several departments in connection with the hospital that add very considerably to the value of its service, and are of great benefit both to patients and staff. One of these is a well-equipped pathological laboratory for clinical or diagnostic work, either for hospital patients or those outside of the hospital.

An experienced pathologist is employed for this work, who is on regular salary and who spends several hours daily in laboratory work. Simple urinalysis and other routine work is done by the intern.

Another most valuable department is that of radiography. Our equipment is most complete, including a coil, radiographic table, stereoscope, static machine, and all necessary facilities for good diagnostic work. A member of the staff who specializes on this line is engaged by the board for this work, which is done on a commission basis.

Hospital patients remaining for more than a week are given a half rate on all laboratory work done, except urinalysis and blood counts, which are always done free. Vaccines are in all cases charged for at full rate. The fee table is as follows:

Urinalysis	$1.00 to $3.00
Diazo test	.50
Quantitative sugar test alone	1.00
Staining for bacteria of urine	1.00
Sputum	1.00 to 3.00
Throat culture with diagnosis	1.00
Throat smear for diagnosis	1.00
Gastric contents analysis	1.50 to 3.00
Blood examinations—	
Simple count with Hgl	1.50
Simple count with differential count of white cells	3.00
Stain for malarial parasite	1.00
Examination for spirochetes	3.00
Widal test for typhoid	1.50
Blood pressure	.75
Milk analysis	1.50 to 3.00
Pus examinations	1.00 to 2.00
Feces	1.50 to 3.00
Tissue curettings	3.00
Tissue—larger pieces	5.00 to 25.00
Vaccines—stock 25 cc	5.00
stock 1 cc	1.00
autogenous	10.00
Wassermann reaction	10.00 to 15.00
Visits away from the hospital by the pathologist, extra	1.50 to 3.00
Each culture and swab	.10

A complete hydrotherapeutic department is located in the basement of our west pavilion. This department contains an electric bath cabinet, hot air and steam rooms for Russian or Turkish baths, small pool, shower, shampoo and massage tables, rest room, dressing rooms, etc. A graduate nurse is employed who has had special training in this particular line of work. She takes entire charge of this department, gives all treatments to female patients, and has oversight of those given to male patients, which are given, however, by a male attendant. She also conducts the course of instruction in massage and hydrotherapy for our pupil nurses, and, as there is sel-

ANESTHESIA AND OPERATION RECORD.

No. .....

Name ..... Date ..... Surgeon .....

Condition of lungs and heart (3 lines) .....

Before	Urine Analysis		After
S. G.			S. G.
Albumen			Albumen
Sugar			Sugar
Casts			Casts
Quantity			Quantity

Leucocytosis ..... Pulse, before ..... during ..... after .....

Resp., before ..... during ..... after .....

Temp., before ..... after .....

Anesthetic commenced ..... Operation commenced .....

Anesthetic stopped ..... Operation ended .....

Amount and kind of anesthetic used .....

Medication during anesthesia (3 lines) .....

Medication after anesthesia (3 lines) .....

Condition during operation (3 lines) .....

Condition after operation (2 lines) .....

Description of operation (8 lines) .....

Anesthetist.

Fig. 2. Anesthesia and operation record.

dom enough work in this department to occupy a nurse's whole time, is given other hospital duties, regulated according to the amount of time required by her regular work. We follow the same plan in the matter of charges in this department as in the laboratory, allowing all patients who stay in the hospital for more than one week a half rate.

A very important feature of the service rendered by Hackley Hospital is represented by our visiting nurse, who devotes her entire time to work outside the hospital. In the early days of the hospital the board recognized the value of having a nurse in the city who could, if necessary, follow convalescent patients to their homes, or who could give intelligent care to cases not ill enough, or perhaps unable for various reasons, to leave their homes to come into the hospital. This service has been of untold value in the care of tuberculosis cases, which must be excluded from our general hospital, and for which the city has as yet made no provision. In order to secure cooperation and assistance in connection with this work, the Visiting Nurse Association was organized, composed of representative women from each church, club, school, etc. The women of the association practically direct this work and furnish the nurse with all necessary supplies for the sick by means of a "neighborhood basket," which is kept in circulation throughout the year by the different members in order to secure delicacies, clothing, old linen, infants' wear, etc.

The compensation for the visiting nurse service depends entirely on the ability of the patient or his family to pay. Her services are given free of all charge when needed, while a small fee may be paid by those not desiring charity. The nurse is a regular employee of Hackley Hospital, appointed and paid by the board. All money collected from patients is turned over toward the support of this work. Having this nurse enables us to do any required social service work or investigating required in connection with hospital cases. It is hoped that, as the work and service develop, the whole time of this nurse will be required for hospital social service work, while the Visiting Nurse Association, which is at present really an auxiliary committee, expects to organize shortly on an independent basis and maintain its own nurse.

Following closely on the decision of Judge Bregy, of the court of quarter sessions of Philadelphia county, in which he declared that animal experimentation was cruelty, the Philadelphia County Medical Society passed a set of resolutions in which nearly 1,700 members placed themselves on record as having full confidence in the rectitude and humanitarianism of the distinguished scientists who were being prosecuted for alleged cruelty to animals. The resolutions were unanimously adopted.

WEIR MITCHELL'S CIVIL WAR STORY.

Last Public Address of Famous Physician-Painter-Novelist-Raconteur Was Plea for Greater Recognition of Army Surgeon.

A very interesting address of Dr. Weir Mitchell, of Philadelphia, before the Physicians' Club of Chicago, is reproduced in the *Journal A. M. A.*, May 9, 1914. He mentions the old medical department of the army, consisting of 30 surgeons and 83 assistants, a considerable proportion of which went with the South during the Civil War, though a number of southern surgeons stood true to the flag. The surgeon-general had to be retired early on account of age, and the vacancy was filled by the appointment of Dr. W. A. Hammond, whose able administration in view of the tremendous problems involved, friendship to scientific work, etc., are mentioned. Dr. Hammond used a great opportunity as few could have done, but he was impulsive and overconfident, and when he at last came in contact with the autocratic secretary of war, Mr. Stanton, he was court-martialed, and, as Mitchell says, unjustly removed from the army after a service of unequaled value. Mitchell describes the building and organization of the great military hospitals, which speedily became admirable and anticipated many of the ideas which are now being advanced. There were, of course, things seen in the surgical wards which it is to be hoped will never be seen again, but great advances were made. To meet the needs of the field and the hospital service, Hammond created the rank of brigade surgeon; another creation of his was that of the medical cadets, among whom some of our best-known modern surgeons started in their career. Some of the surgeons lost their lives under fire, and there was, under the circumstances, an appalling mortality and much bad surgery. Mitchell's memory of hospital nurses during the war is mixed. The orderlies soon became rapidly efficient for the less exacting duties of that time. Some of the women nurses were not above criticism, but there are some of whom he has since thought with grateful remembrance. Some of his interesting personal experiences are given, and he mentions his study of nerve lesions, which were among his earlier contributions to medicine. The military surgeons of the Civil War have not received, he thinks, due recognition. In the battle of Gettysburg and other battles every place where a general fell is marked, but we should remember that the marking of sites of corps hospitals with bronze shields and the names of the surgeons in charge, as he suggested to the Gettysburg commission, is the first national recognition of the surgeons of the Civil War.

A home for the aged and orphans of the Order of Hermann Sons is to be erected near Comfort, Tex. The building is to be of reinforced concrete, thoroughly fireproof, comprising two stories and basement. It will contain fifty rooms, ten complete bath rooms, two sleeping dormitories to accommodate thirty children and connected with bath, wash rooms, and showers. Living quarters and a large office are provided for the custodian. A large rotunda or lounging lobby is located immediately in front of the entrance on the first floor. Connecting with this are three corridors, two dining rooms, a guest room, a ladies' parlor, a gentlemen's parlor, and a smoking room. Two hospital wards with connecting baths and all medical requirements for the sick room are located on the second floor. The basement contains the kitchen, storage rooms, laundry, and heating plant. The architect's drawing of the structure indicates that it will present a handsome appearance and some rather unique features.

THE ITEMS IN HOSPITAL EFFICIENCY.[1]

The Hospital Diet—Patients Are Fed Too Much and Badly—There Are No Trained Dietitians and No System of Scientific Feeding—A Suggested Feeding Chart.

By JOHN ALLAN HORNSBY.

THE hospital patient in the United States is fed too much and fed badly. This statement is not true universally, but it is true in a vast majority of cases. We hear on every side inquiries and arguments about the feeding of patients in hospitals, but we almost never hear about the scientific feeding of the sick.

There are literally hundreds of hospitals in the United States that have a reputation for feeding their patients well—meaning that they give them large quantities of good food, well cooked and well served; but there are not three hospitals in the United States in which an exacting physician can count on having his patient fed an accurate, scientific diet over any considerable period of time, and there are not three hospitals in the United States which, in routine practice, are able to tell the physician what they are doing for his patient in the way of scientific feeding from day to day.

There are not three competent hospital dietitians in this country—meaning by this that there are not three women holding the position of "dietitian" who are capable of taking orders for a scientific diet in consonance with certain purposes of metabolism, and then going to the kitchen and feeding that patient in the way prescribed. And yet it has come to pass that selected foods have taken the place of drugs in many diseases and under many conditions, and we are learning more and more about foods, their availability, their chemistry, and their utilization in the human system under the influence of the processes of digestion. The so-called hospital "diet lists" are absolutely worthless for giving the physician an accurate accounting of what is being done for his patient in the way of food.

A great many people are under the impression that a "diabetic" diet is composed of food material absolutely without sugar, and these same people are under the impression that a diet for a patient suffering from nephritis, in which albumin is one of the chief symptoms, has absolutely no proteid constituents. Of course, this is entirely untrue. Foods do not come in such a clearly demarked way. A diabetic food is one relatively low in sugar, and food for a patient suffering from Bright's disease is one relatively low in proteid chemical constituents.

A good many doctors are satisfied to have their patients fed on the so-called "special diets," measured in calories.

Let us take a hypothetical case. A patient is suffering from Bright's disease; the doctor orders a "strict nonnitrogenous diet." When the patient comes into the hospital, a quantitative examination of the urine is made, giving the percentage of albumin; the blood is carefully examined, the blood pressure is taken, the hemoglobin determined, and the patient is weighed. If a really serious attempt is being made to feed the doctor's patient properly, these examinations are repeated daily and a strict diet is maintained. At the end of five days, let us say, the doctor finds that the albumin has gone down in quantity, but he finds that his patient has lost weight—now what is he going to do? Perhaps the caloric measurement of the food has been taken, and he finds that his patient has been getting about two thousand calories per day. He is now facing the problem of further orders for food. What is he going to do about it? He knows, in a general way, that his patient has been getting food low in proteid, but he doesn't know how low, and he doesn't know how much fat or how much carbohydrate, or how much fluids the patient has been getting. But suppose he knew exactly how much proteid and how much carbohydrate, and how much fat his patient had been getting during the past five days. Would it not be a comparatively easy thing for him to order a slight increase in the proteid and perhaps a large increase in the fats, depending on these changes to improve the patient's weight without increasing the albumin in the urine?

No system exists, as a routine practice in any hospital in this country at the present time, by which a physician can have access to this information. Is it not a commentary on the accuracy and scientific value of the hospital dietary when we must confess that we are unable to tell the doctor in any scientific terms what his patient is getting in the way of food? And yet this is the actual condition that exists, and it is not necessary that it should exist, because all the information necessary is at hand in quite useful form; indeed, in such useful form that a pupil nurse, with a little training, can apply the system.

The United States Department of Agriculture has published a bulletin containing the so-called

[1]This is the fourth of a series of eight papers discussing the various factors in hospital efficiency. Last month, "Physical Therapy."

Special Diet Record

Admission No._____

Name _____ Physician _____

Location _____ Interne _____

Date of Admission _____ Special or Floor Nurse _____

Diagnosis _____ Special Diet Nurse _____

Special Diet for **191**

BREAKFAST

ARTICLE	How Served	Quantity	Quantity Returned	Quantity Consumed	Proteid	Carbo-Hydrate	Fats	Salts	Fluids	Calories	Remarks
TOTALS											

Quantitative diet chart. Full size, 8½ inches wide by 13½ inches long, with divisions for dinner, supper, and between-meal feedings.

Atwater tables of chemical constituents of food material. These tables will lend themselves to the practice of an accurate feeding system for hospitals, and by referring to them the diet nurse can tell at a glance just how much of each chemical constituent any given article of food contains.

Now, let us feed a patient a breakfast—not with reference to a strictly nonnitrogenous dietary, but just a breakfast. The menu is as follows: cantaloupe, 6 ounces; two soft-boiled eggs (giving actual weight); broiled bacon, 1 ounce; tea, ⅓ pound, diluted with 1 ounce of 24-percent cream and sweetened with 4 grams of sugar.

This is the food that actually went to the patient, and it went there without anyone, excepting the dietitian, touching it; so nothing was added or subtracted. When the dishes were brought back to the diet kitchen the cantaloupe rind was weighed and the weight deducted from the total weight of the cantaloupe supplied. Only a part of the boiled eggs was eaten; what was left was weighed back and deducted from the total amount sent up. The cream for the tea was not used and was returned with the dishes. A note sent down with the returned dishes, by the nurse in the case, stated that the patient insisted upon another cube of sugar, which was given to him.

Now, let us see how we are going to determine just what the patient had. By turning to the Atwater tables, we find that cantaloupe is made up of so many parts of water, so much percentage of sugar, so much proteid, and so on. We find by reference to the same tables that the quantity of bacon actually consumed contained so many grams of proteid, so many of carbohydrate, so many of fat, and so much fluid. In the Atwater tables also we find the caloric values per pound of these various articles of food; so that by the simplest calculation we can determine for the doctor exactly how many calories the patient had for breakfast, and the division into chemical constituents of food. See the illustration.

The same process can be carried out for dinner, for supper, and for any between-meal feedings the patient may have had. This chart can be carried out from day to day, and so at the end of five days, when the physician finds that his patient has lost three pounds in weight, and has also lost say 3 percent of albumin, he can go back to his daily feeding charts, and to a nicety will be able to tell just how much proteid the patient will stand and how much carbohydrates, fats, and so on. This system, if carried out in a routine way, is not at all difficult, and a pupil nurse with common sense, acting under the direction of a competent dietitian, can do the work, make the calculations, weigh out and weigh back the food materials.

Of course, there are some very slight inaccuracies in this system to account for, as, for instance, the bacon will be weighed raw and when it is cooked it will have lost a certain amount of fat. It would not always be easy to tell accurately whether the cream supplied was 18 percent or 24 percent, but relative values would be there. The amount of fat lost in the bacon in the first five

days would also be lost in the second five days; the cream, if it were a 24-percent cream in the first five days' feeding, would be likely to be a 24-percent cream thereafter. If this system of hospital feeding of the sick can be carried out, it sums up the whole problem of the special diet.

It is true, there are very few physicians who would appreciate a diet of this character at first, and very few who would attach much importance to the accuracy of this method of feeding, but there are a sufficient number of men who will appreciate it. The hospitals have been following blindly a long way behind the medical profession in scientific service. Is it not about time that the hospitals should ask from medical staffs actual employment of scientific methods if they are to require scientific service? If this method is installed in a hospital, and if only one man uses it, it will not be long before others will find themselves compelled to use it also.

As for the rest of the hospital dietary, very little need be said. There is very little more of it. Of course, members of the medical profession who have private patients in the hospital are going to insist that the hospital shall please these patients in the matter of food, and it goes without saying that food should be properly purchased and in good condition, and that it should be well cooked and well served.

It is almost uniformly the case that physicians are disposed to blame the hospital if things are not right with the food of patients, and too often is this true, even when the hospital has been living rigidly up to the orders of the physician in the matter of quantity and quality. We all know that rich, expensive foods are not good for patients, as a rule, and that simple, well-cooked foods are better than made-up dishes. Every physician knows that his patient will be better off with a small slice of tender roast beef served free from insoluble greases, than a greasy, garnished stuffed bird, but there is almost no physician who has the courage to deprive a private patient of the richer food, and he compels the hospital to supply it.

Many physicians also have the habit of allowing patients to choose their own articles of diet, and of ordering for them the most difficult things to purchase and prepare. Patients are notoriously capricious of appetite. The hospital may have spinach and asparagus and new potatoes today, but, having seen these on the diet list, the patient decides she does not want them, but wants French peas, string beans, and sliced tomatoes out of season instead. It would be an extremely easy thing for the physician in these cases to say to his patient, for instance, "Now, I am going to have some little surprises for your appetite, and I have given orders that you are not to know what you are going to have for meals; I do this so that you will relish the things that are brought to you." With an explanation of this sort, the labor for the hospital of preparing individual and special articles would be reduced to a minimum and a large part of the present expense of feeding private patients would be eliminated.

EXCHANGE OF MEDICAL STAFF MEN.

Proposed in the Interest of Progress and to Avoid Routine and "Institutionalism," Staff Members Exchange Services.

Recent years have beheld a vast development in the idea of travel study in medicine and surgery. Clinical congresses and travel tours have demonstrated the advantage of the exchange of ideas and the dissemination of new methods. This development has not been confined to the medical sciences. It has been conspicuous in other branches, particularly in chemistry, mathematics, law, and the social sciences. The frequent calls made by the universities of Germany and Austria for professors in other institutions and the consequently frequent transformations of the faculties in these universities exemplify the desire to infuse new blood into the bodies of learned institutions. Science rebels against routine. Its healthy existence demands constant renewal. The German idea has found a new development in the creation of exchange professorships, so that there now exists a series of exchange professorships between America on the one hand and Germany and France on the other. Would it not be feasible to apply this idea in hospital administration? One of the greatest drawbacks of the modern hospital system is the blighting effect of routine and institutionalism. However great may be the desire on the part of members of the hospital attending staffs to escape from the evils of working in a rut, however eager they may be by their attendance at national and international congresses to acquire new ideas and methods, however assiduous they may be in their visits to the clinics of their colleagues both in their own country and abroad, nevertheless they cannot altogether escape the deadening influence of routine. The idea of an exchange system could be easily applied in any of the larger cities. It should occasion no revolution in hospital efficiency if two institutions agreed to exchange, for instance, one of their attending surgeons for a period of from three to six months or even longer. This does not imply that the exchange surgeons would at once or at any time try to upset the system that had been established in the institution to which they were assigned. It does not imply that they would seek to make any startling change in operating room methods and technic. One would, on the other hand, conceive of the visiting surgeons both imbibing and imparting new ideas in a manner that is not obtrusive, influencing both the assistants and the other individuals connected with the hospital by the force of their example and the power of their personality. Whether the surgeons would care to make the exchange is another question.—*New York Medical Record.*

After having been closed for several years, the Strasburg (Va.) Hospital has been reopened. Dr. H. M. Duncan is in charge.

OPERATING ROOM TECHNIC IN THE ROYAL VICTORIA HOSPITAL.

Preparation of Room, Table, Patient, and Material—Care, Sterilization, and Storage of Gloves and Other Rubber, Dressings, Bougies, Catgut—Formulas for Solutions.

By MISS R. K. FELTER, Nurse in Charge, Royal Victoria Hospital, Montreal.

THERE should be no confusion in the operating room, and each person should become thoroughly acquainted not only with his or her duties, but also those of others employed in the operating room. There should be no unnecessary talking, and each movement should be executed quickly and noiselessly, and without coming in contact with other persons. The operating furniture consists of an operating table, a sterile table, two or three footstools, two chairs, two basin stands, one basin for soiled gauze, and a pail for waste solutions. Soiled instruments, basins, linen, and table to be removed and floor mopped after each operation.

Preparation of Operating Table.—On the table is placed a rubber-covered mattress, Trendelenburg crutch, small rubber-covered pillow, and the lithotomy posts; a number of sand pillows should be near at hand.

Preparation of Basins.—A jar containing nail brushes in a solution of bichloride of mercury 1-5,000 or left dry, a dish of green soap, a nail file, a bottle of glycerin and rose water should be on each basin stand. Brushes used to be boiled and returned to jars after each operation. Towels to be hung over glass at back of basins.

The Scrub-up Table.—This is left ready, with a bottle each of ether, double strength tincture of iodin, benzin and Columbian spirits; also a razor, dressing rubbers, some gray cotton bandages, sterile sponges, swabs, and forceps.

METHODS FOR THE STERILIZATION OF THE PATIENT'S SKIN.

First Method.—The skin is first thoroughly rubbed for two or three minutes with gauze swabs wrung out of the benzin solution, care being taken not to allow any excess of benzin to run down and remain upon dependent parts where they are in contact with the rubber sheeting under the patient (otherwise a blister may be caused); this is followed by rubbing with gauze soaked in alcohol (Columbian spirits is sufficient). The alcohol removes the benzin and at the same time assists in sterilization.

Although there is a certain percentage of iodin in the benzin solution, it is usually thought wise to add to the above a third step, consisting in the painting of the skin with tincture of iodin as by the Grossich method. The composition of the benzin solution is as follows:

Benzin	75 parts
Paraffinium liquidum	24 parts
Tincture of iodin	1 part

The solution should be well shaken before being applied.

Second Method—Grossich's Method.—This consists in the simple application of tincture of iodin over the field of operation. It is usual to make a second application after the first has become dry. The skin is not previously prepared in any way, and in particular the use of water shortly beforehand is unwise, as this impedes the full action of iodin; thus, if shaving is necessary, it is well to have it done some time before the operation, or else to shave dry.

The double strength of tincture of iodin is the one most frequently used. A formula is as follows:

Iodin, 5 percent	1 part
Potassium iodin	1 part
Alcohol, 94 percent	ad 20 parts

Disinfection of the Operating Room.—The walls of the operating room should be washed down once a month with soap and water and hosed down once a week; the furniture washed once a day or oftener if necessary; the operating table, dressing rubbers, and sand pillows with sanatine or soap after each operation; with creolin 1-160 or bichlorid 1-1,000 after every septic case. The department should be dusted daily and be always ready for use. Dusting or cleaning should not be done just before an operation, and the air of the operating room should always be moist. All windows must be kept closed and drafts avoided; in summer those windows which are to be kept open in rooms adjoining the operating room should be provided with screens. The temperature of the room should be between 70 and 80 degrees F. After cases of streptococcic infection the operating room is disinfected by the formalin process.

Enamel Ware.—Hand basins, pitchers, kidney basin, etc., are scrubbed with soap and water or sapolio, and boiled in 1 percent solution of soda carbonate for thirty minutes.

Brass and Nickel Work.—Is cleaned weekly

with metal polish and a soft cloth, and dusted daily.

Glass Flasks, Basins, etc.—Are washed once a week with liquid soap and water, followed by oxalic acid crystals, then by liquid ammonia and rinsed with distilled water.

Preparation of the Hands.—Scrub hands and forearms with brush, hot water, and spirits of green soap for five minutes, paying particular attention to the nails.

Swab hands and forearms with 70-percent alcohol for two minutes. If running water be not used, the water must be changed at least twice. Rings must be previously removed and nails carefully pared. This method may be used in preparing the field of operation with the addition of swabbing the skin with ether before applying the alcohol.

Operating Room Costumes.—Surgeons and house surgeons wear white linen blouses and trousers, nurses on duty in operating room wear white linen or cotton dresses, putting on a fresh one each day or oftener if necessary; also caps to cover the hair, changing them every second day. The gowns are long-sleeved, belted in, and fastened down the back. Surgeons, assistants, and nurse in charge wear sterile gown, rubber gloves, and mask for each operation. Gloves and gowns are changed after each operation.

Visiting Doctors and Students.—Are provided with freshly laundered cotton gowns, made long-sleeved and loose fitting, which will be found hanging in students' passage; these are to be put on before entering theater. Each nurse must wear rubber heels. The operating room orderlies wear white cotton blouse and trousers, and also coat with red cross on sleeve to wear when leaving the department.

Gowns.—Are of three varieties. For operators and assistants, long- and short-sleeved, as preferred; they are laundered in the usual manner, after which each gown is placed in a heavy factory cotton bag pinned up loosely and sterilized. Patients' gowns are made long-sleeved of heavy canton flannel. Patients' pneumonia jackets are made of double canton flannel, with the fleecy side out.

Rubber Aprons and Dressing Rubbers.—Are made of thin double-faced rubber sheeting; they are cleaned after each time of using by scrubbing with soap and water, and wiping off with formalin 1-1,000.

Rubber Gloves.—Gloves after use are washed in cold running water on both sides, then boiled from five to fifteen minutes in a 1-percent solution of soda carbonate, dried, and powdered with talcum on both sides, patched with rubber (which also has been boiled) by rubbing the surface of both gloves and patch with benzin, and then with fine sandpaper; then apply rubber cement to glove and allowing five to ten minutes to dry, press the patch down over the cement, using a good deal of pressure; gloves are then mated, placed in heavy factory cotton covers and sterilized by steam for ten minutes at 10 pounds pressure. The hands are thoroughly disinfected, dried on sterile towel, and powdered with sterile talcum, and the gloves put on dry.

Towels.—Should be made of heavy linen toweling 36 by 20 inches, and sterilized in packages of four with one sheet.

Blankets for Use in Operating Room.—Should be the ordinary single blanket cut in half. This size is most convenient for wrapping round the legs of the patients or placing over the chest. They are laundered after each time of using.

Head Nurse in Operating Room.—Is responsible for the care of the whole department and the furniture and apparatus pertaining thereto. She is responsible for the preparation of all instruments, dressings, ligatures, sutures, and appliances necessary for each operation. She or her assistant stands at the instrument table during operations, and passes such instruments to the surgeon as he may require. She should endeavor in every way to anticipate his wants; she watches closely the nurses who assist her in the operating room and who are under her directions, and sees that they properly perform their duties. She must not leave her post at the operating table except at the request of the operating surgeon. She delivers such messages as are reported to her to the person for whom such message is intended. She sees that all the instruments and appliances are kept locked when not in use.

Instruments.—Should be kept in their proper places in instrument cases when not in use. Knives should be kept in racks to prevent dulling. Needles should be kept in needle trays. Instruments made in part of soft rubber should be kept in separate drawers. Needles and knives are boiled separately from other instruments—the needles in a glass tray and knives in a rack with edges up to prevent dulling. They are boiled from one to three minutes in a solution of 1-percent carbonate of soda, 3 drams to one quart of water; there should always be sufficient solution in the boiler to cover the instruments. Directly after use instruments should be washed piece by piece in cold running water until all blood stains are removed, using a stiff nail brush to facilitate the cleansing, particular attention being paid to locks and crevices; instruments are then boiled from five to twenty minutes in the soda solution; following this they are scrubbed with sapolio and liquid ammonia until bright, rinsed in very hot

water and dried thoroughly with soft towels, and put in their proper places. Each of the cutting-edge instruments should be looked over, and sent to be sharpened if necessary; there should be a sufficient number of knives to allow a fresh one for each operation. Instruments out of repair should be sent to the office at once.

Nail Brushes.—Should be of the common hand brush variety, of good quality, and not so stiff as to abrade the skin.

Soaps.—Green soap, therial soap, glycerin and alcohol soap, and castile soap are used in this department.

Solutions.—

Lysol, minims xx to oz. xx. equals 1 in 500.
Creolin, dram j to oz. xx. equals 1 in 160.
Normal saline, dram j to oz. xx.....equals 9/10 percent.
Formalin, minims xij to oz. xx.....equals 1 in 2,000 formaldehyd.
Hydrochloric perchlorate, solution 1 in 20, xL to oz. xx.....equals 1 in 5,000.
Hydrochloric perchlorate, tablet grains 7½, tablets j to oz. xvj.....equals 1 in 1,000.
Potassium permanganate, oz. j to oz. xx.....equals saturated solution.
Oxalic acid, oz. ijss to oz. xx .....equals saturated solution.
Boric acid, oz. j to oz. xxv. equals saturated solution.
Carbonic acid, oz. j to oz. xx .....equals 5 percent or 1 in 20.
Soda carbonate, dram jss to oz. xx.....equals 1 percent.

Normal Saline.—The flasks are first washed with soap and water, then with oxalic acid crystals and water, shaken thoroughly, then liquid ammonia, then rinsed well with distilled water. Dissolve one dram of sifted salt to each pint of distilled water, filter into flasks after first washing glass funnel and wetting the filter paper, plug with nonabsorbent cotton, sterilize by steam for one hour at 15 pounds pressure, allow pressure to go down very slowly to avoid jarring the flasks, cool slowly and put away ready to be heated to 110 degrees and placed in the incubator.

Iodoform Emulsion, 5 Percent.—To one part of iodoform powder add 20 parts of glycerin. Place in a glass flask, plug with nonabsorbent cotton and sterilize for one-half hour at 10 pounds pressure of steam and allow to cool slowly.

Iodoform Gauze, 20 Percent.—Iodoform powder, 10 drams; carbolic acid, 1 in 40, 6 ounces, and castile soap to make a good lather. Take 3 yards of absorbent gauze, draw threads in the desired widths crosswise throughout the length of the gauze; then take up all of the solution, shaking and slapping until well distributed. Cut where threads have been drawn, fold edges in; roll and place in test tubes. Plug with nonabsorbent cotton and sterilize for one-half hour at 10 pounds pressure of steam.

Rubber Tubing.—Procure specially prepared tubing without sulphur coating; scrub with stiff brush and green soap, then boil for fifteen minutes in 1-percent solution of sodium carbonate; Place in sterile normal saline solution, from which solution tubing is used.

Silkworm Gut.—Boil for ten minutes in distilled water, allowing it to remain in the hot water during operations to keep it soft and pliable.

Horse Hair.—Scrub with hot water and green soap, rinse thoroughly in distilled water, then in 50 percent alcohol, then boil same as silkworm gut before using.

Silver Wire.—All pieces of silver wire should be saved, as manufacturers allow for silver wire returned. This is prepared by boiling with the instruments.

Plain Gauze.—Draw threads, moisten in distilled water or leave dry; cut, fold, roll, and place in tubes and sterilize the same as iodoform; all gauze in this department is cut 2, 6, or 12 inches, the edges of each being turned in.

Vioform Gauze.—Draw threads and saturate in the following solution: vioform, 100 parts; alcohol, 650 parts; glycerin, 250 parts. Cut, fold, roll, and place in tubes, and sterilize the same as iodoform gauze.

Sterilizing.—All dressings, sponges, gowns, towels, aprons, surgeons' silk, etc., are sterilized for one hour at 15 pounds pressure of steam, after which time the pressure is allowed to go down, the water drained off and the heat of the sterilizer allowed to dry contents.

Dressing Gauze.—The usual double fold of absorbent gauze is cut 24 inches long, folded to 6 inches, with edges turned in. One dressing consists of three such pieces and three pieces of absorbent cotton cut to the same size; place in heavy cotton and sterilize.

Abdominal Towels.—Are made of absorbent gauze 18 inches square, placing two in each cover, and sterilized.

String Pads.—Are made in two sizes. The larger is cut 24 inches and folded to 6 inches, with edges in; to the end of each is attached a string or tape 4 inches long. The smaller are cut 12 inches and folded to 3, with edges turned in; to the end of each is tied or attached a string or tape 4 inches long. These pads are put up in heavy covers containing six pads, and when opened for operation are counted again in presence of witness and also after operation.

Gauze Rollers.—The rollers are made by folding the usual absorbent gauze to 4 inches, cut 3

yards long and rolled; done up in packages of one each and sterilized.

Bandages.—White and gray cotton are cut 6 yards long by 1, 2, 3, 4, 5, 6, and 7 inches wide.

Flannel Bandages.—White and gray are cut 5 yards long by 3 and 4 inches wide.

Plaster Bandages.—A variety of plain crinoline impregnated with thin glue, leaving plenty of space for plaster; White's dental plaster is rubbed evenly into the crinoline until the meshes are well filled. The bandages are rolled loosely, to permit the water to penetrate quickly; they are cut from 2 to 8 inches wide and 4 yards long; they are wrapped in paper and kept in a dry place.

Rubber Goods.—The stock supply of rubber goods—such as rubber tubing, catheters, stomach tubes, perineal tubes, Esmarch constrictors, and Martin's elastic bandages—should be kept in a drawer by themselves and liberally sprinkled with powder sulphur. Treated in this way, rubber can be kept in good condition for years. Rubber tubing should not be kinked, nor should rubber sheeting be creased. Rubber drainage tubes in desirable lengths are cut from the stock supply, scrubbed with soap and water, boiled for ten minutes in 1-percent solution of soda carbonate and placed in covered glass jars containing 1-10,000 solution of bichlorid of mercury or normal saline. Boil tubing and change solution once a week.

Bougies, etc.—Filliform bougies, silk woven catheters, and esophageal bougies *should never be boiled;* they are washed with soap and cool water, then with cold bichlorid of mercury 1-5,000, carbolic acid 1-80, or formalin 1-500, and then *cold* distilled water, from which solution they are used: after use they are washed with soap and *cool* water, rinsed and water forced through catheters, carefully dried, and oiled before putting away. Hot or even warm solutions soften these too much.

Tourniquets and Rubber Bandages.—Are washed with soap and water, boiled, dried, powdered, and rolled up ready for use.

Surgeons' Silk.—Wind silk on glass spools and place in test tubes; plug tightly with nonabsorbent cotton, sterilized by steam for one hour at 15 pounds pressure; open valve in top of sterilizer, and leave for three-quarters of an hour to dry with door closed. Silk may also be boiled for five to twenty minutes in normal saline or bichlorid 1-1,000, and preserved in sublimated absolute alcohol 1-5,000, and also by waxing. Linen thread is prepared in the same way as silk.

Thermo and Electric Cautery.—This should be tested each operating day, and reported to head nurse if out of order. Its principal use in the operating room will be for the destruction of mucous membrane in appendectomy, in operations on the liver and bile passages, and in hemorrhoid operations. From three to five minutes should be allowed to get the cautery in running order. *The heated cautery should be kept at a distance from the anesthetic,* as ether is inflammable.

Splints.—Are kept in a room at the top of the students' stairs. All varieties of splints and splint material should be in stock. There should be a small table and set of tools, so that special splints can be made.

The Anesthesia Room.—The furniture consists of the anesthetic table, a glass case containing a reserve supply, masks, mouth gags, tongue forceps, etc., the gas and oxygen apparatus, the stretcher, towels, patient's cap and blankets. The stretcher is provided with a rubber-covered mattress and straps for holding patient. On anesthetic table place chloroform, with dropper and mask, vaselin, tongue forceps, mouth gag, swab forceps, hypodermic syringe charged with strychnin 1-30 grain in brandy, and aseptic needle to fit, kidney basin, two medicine glasses, and other restoratives, consisting of morphia ¼ grain, digitalin 1-1,000 grain, and ergotol. The mouth gag, tongue forceps, and swab are boiled after each case. The eyes of the patient should be covered with folded towel. In spite of this precaution, should some of the anesthetic enter the eyes, they should be irrigated with boracic solution, after which drop a little oil of ricini into each eye to relieve irritation. The patient's head should be turned on one side, and should be lower than the body to facilitate the escape of secretions from the angle of the mouth.

ARTICLES FOR OPERATION IN PRIVATE HOUSE.

1. Twelve old newspapers for the floor.
2. One large sheet for the floor.
3. Tacks and hammer for the floor.
4. One kitchen table.
5. One large sheet, one mackintosh, one blanket for table pad.
6. One small blanket, one mackintosh, string and adhesive plaster for Kelly pad.
7. Two kitchen chairs, two sheets and two pillow cases for covering them, and two table leaves for instrument table.
8. One wash stand, and sheet and towel for covering it.
9. One small table for anesthetic.
10. One bath tub for disinfecting utensils.
11. Two stools for hand basins.
12. One wash boiler for sterilizing instruments and dressings.
13. Two hooks for holding table.
14. Utensils for bath tub: two wash bowls, three large water jugs, one small water jug, two small bowls, four small plates or saucers, one kitchen fork.
15. Articles for wash boiler: four sheets, ten towels, dressings, sponges, gloves, nail brushes, and instruments.
16. Articles for doctor's stand: one basin, three brushes, one nail file, and liquid soap.
17. Articles for scrub-up table: one razor, swabs,

liquid soap, water, alcohol, 5 percent tincture of iodin, and formalin.

18. Articles for anesthetic table: one hypodermic syringe, strychnin 1/30 grain, and brandy, ether, and mask.

19. One small sofa pillow and blanket for patient.

20. Two water bottles for cold sterile water; one preserving kettle for hot sterile water.

Dressings to be sterilized for one operation:

One sheet.

One-half dozen long towels.

One-half dozen short towels.

Two dozen flat sponges (large and small).

Two bags small sponges.

Two dressings and bandages.

One cap, gown, and pair of rubber gloves for each surgeon and nurse.

Roller dressing for leg or arm case.

Ether or chloroform mask.

STERILIZATION OF SUTURE AND LIGATURE MATERIAL.

Iodin Catgut—Claudius' Method.—The usual commercial variety is wound into small rings or on glass tubes, placed in a covered glass jar with the following solution: 1 percent iodin in distilled water with sufficient iodid of potash to saturate. The solution is made by dissolving 1 part of iodin and 1 part of potassium iodid in 100 parts of water. The potassium iodid is dissolved in a small quantity of water, to which the iodin, finely pulverized, is added, and the concentrated solution then diluted to L5.

The solution and catgut are kept in a jar with wide mouth, which is covered with accurately fitting glass stopper. The date and number of the catgut is written on the label of the jar. After eight days the solution is drained off, and catgut washed with *absolute alcohol,* being careful to use sterile instruments in handling catgut; this alcohol is then drained off and fresh *absolute alcohol* added, filling jar to the top, and the catgut is ready for use.

Catgut thus prepared is soft, pliable, and strong. The knots are firm and not liable to slip or loosen, and according to its size resists absorption for from seven to twelve days.

Chromicized Catgut.—The usual commercial variety is prepared by the iodin method; after that it is stretched on wooden frame or wound on large test tubes. To chromicize to the desired degree, place catgut for five, ten, or thirty hours in the following solution:

Bichromate of potash.....	1/5 grams
Glycerin	10 grams
Carbolic acid.....	10 grams
Distilled water.....	480 grams

Dissolve the bichromate of potash in the water, then add the glycerin and carbolic acid. After five, ten, or thirty hours remove the catgut from the solution and leave on frame or test tubes for drying. Dry in a temperature not exceeding 40 to 50 degrees C. The drying process should extend over several days. Cut the catgut, when thoroughly dry, into pieces one meter in length, roll on the fingers into small coils, pack in small glass jars, and cover with *absolute alcohol;* with washer and screw top make the jar fluid tight, put small jar into larger jar containing from 2 to 4 ounces of absolute alcohol, screw down air and fluid tight, and sterilize in Arnold sterilizer for five hours, or in autoclave for one hour at 15 pounds pressure of steam. Remove cover of sterilizer and allow contents to cool gradually. By readjusting washer and filling the jar with absolute alcohol to replace that lost in the process, the catgut is ready for use.

PLANS AND DESCRIPTION OF A $400,000 HOSPITAL.

The Problem in the Wichita Hospital Was to Create a Complete Scheme and Build Gradually Around and in Place of an Old Building.

By L. B. SIMPSON,
OF KEENE & SIMPSON, ARCHITECTS, KANSAS CITY.

THE hospital site is an entire block 260 feet square. The present building, which is a remodeled business building, stands at the southwest corner of the block. The problem that confronted us was to design an addition that would be a complete hospital within itself, and without alterations when the project is completed. The next step will be to complete this building to the north, shown at B on plat plan; then the nurses' home, shown at A. Building B will be mostly wards, with few bed rooms. Portions shown at C indicates sun rooms. After buildings A, B, C, and D are completed, the old building (shown by dotted lines) is to be razed and the administration building E and building F are to be completed. The first addition shown at D will cost about $70,000, while the completed scheme will cost about $350,000 to $400,000.

The buildings will be of fireproof construction, with outside walls of tapestry brick and stone trimmings, designed along simple lines. There will be a hot-water heating system, with the boiler in the old building for the present, the power house to be built later. The main kitchen will be in the old building, with diet kitchens on each floor of the new building. Main kitchens will

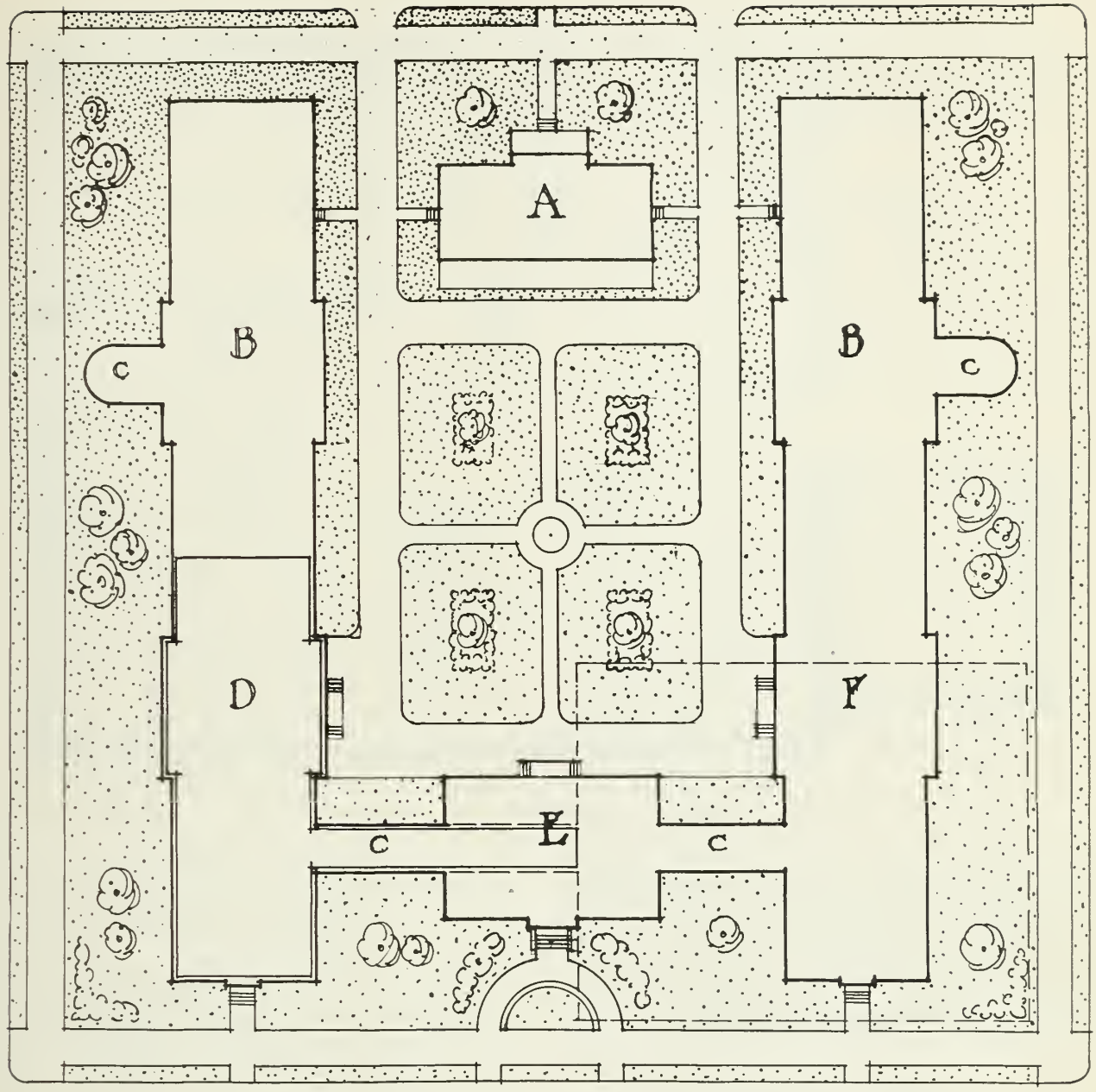

Fig. 1. Wichita Hospital—Block plan. Old building now in use in dotted lines.

be placed in building B afterward. There are no wards in building D, except a children's ward on the fourth floor.

On the first floor are located the temporary main entrance, offices, and reception room, ambulance entrance, surgical dressing room, and bed rooms. The second, third, and fourth floors will have bed rooms and hospital service rooms. On the fifth floor will be the operating rooms and roof garden. All bed room floors will be of oak, with

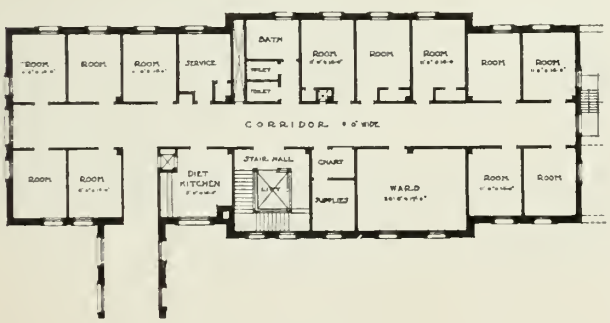

Fig. 2. Wichita Hospital—First floor plan, with administration.

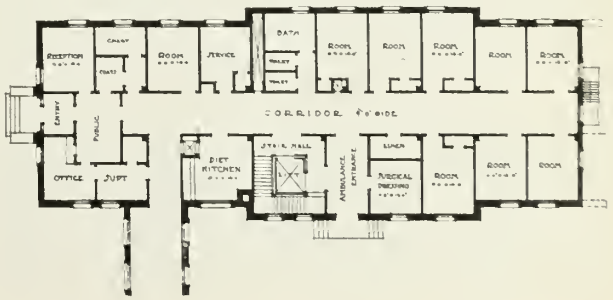

Fig. 3. Wichita Hospital—Fourth floor plan. Typical units.

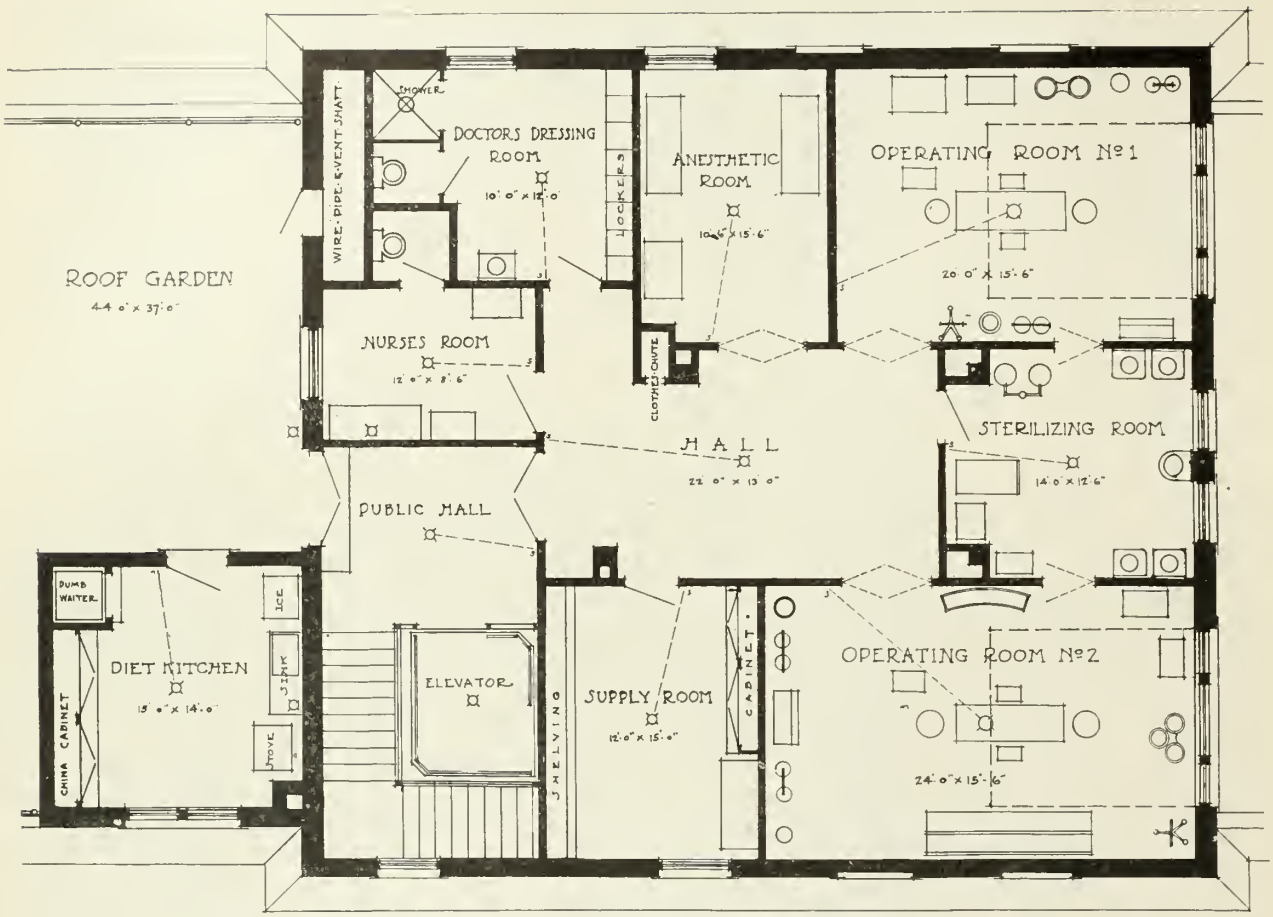

Fig. 4. Wichita Hospital—Fifth floor plan. Operating rooms.

marble window stools. Toilet and operating room floors are to be of tile. Floors in corridors are to be composition. Radiation is direct, with ventilation through the transoms to the halls, the halls to be ventilated by transoms at either end. It is the intention to carry this system of ventilation throughout the entire scheme, except in operating rooms. Silent signals and telephone connections are to be in each room. All corners in the plastering are to be rounded, and little or no wood will be used. The connecting corridors C will be wide enough to act as a sun room and a corridor between the buildings.

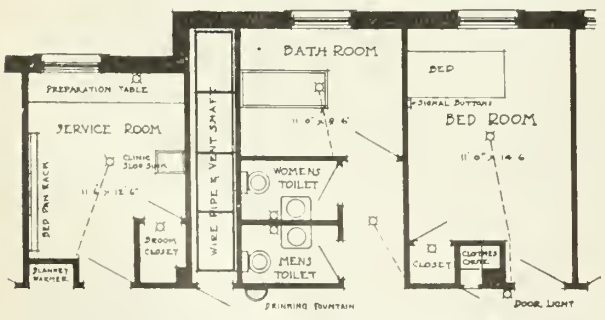

Fig. 5. Wichita Hospital—Detail of service portion of first, second, third, and fourth floors.

We All Know This Patient.

Recently the following was received at the East Side Clinic, New York, which is self-explanatory. Such letters as this are some compensation for the unpleasantness and drudgery of work in the clinics:

"Dear Doctor: I, Mrs. ——, one of your patients whom you sent to Otisville, takes the liberty of writing these lines to you. Allow me to thank you for sending me to such a nice place as this. May God bless you and save you, so that no harm may ever come your way. Believe me, Doctor, if I can't get cured here, there is no hope for me.

"I was born and brought up in New York, and never did I breathe such pure air as is here; all I had was garbage barrels around me and sputum to step in all around, and the air from the gas house nearby; no sunshine before my eyes all day long, nothing but darkness, and I seemed happy. Could you imagine how I feel now. I feel as though I was dying and arose to heaven.

"Thank God you had pity on me and sent me away. Why not help my husband to get here, so that he, too, may breathe some pure air. He is a citizen, a good one, too; a man that has suffered a good deal in life; he was always a good husband; never drinks nor smokes nor gambles, but always tried to make an honest living for me; he is being treated in the clinic for the past two years and is always ailing. Send him here for the summer, please. He will be willing to do any work in return. Please, Doctor, help him get away. By so doing, oblige,

"Mrs. ——."

"P. S.—Dear Doctor: I was put to work already, and, believe me, I am doing it cheerfully. Anything to get a breath of this pure air. Please send my regards to the head nurse with the light hair, that sends our cards upstairs. She is some lovely person."

A cannery is being installed at the Dayton (Ohio) State Hospital.

ADVANTAGES OF STATE CONTROL OVER TUBERCULOSIS HOSPITALS.[1]

There Should Be Adequate and Permanent Supervision Over County Institutions by Trained Specialists—Unwise Methods Destroy Value of Institution—Permanent State Commission Best Form of Control.

By H. LONGSTREET TAYLOR, A. M., M. D.,

PRESIDENT ADVISORY COMMISSION MINNESOTA STATE SANATORIUM, MEMBER AMERICAN CLIMATOLOGICAL ASSOCIATION, CORRESPONDING MEMBER INTERNATIONAL ANTITUBERCULOSIS ASSOCIATION, DIRECTOR POKEGAMA SANATORIUM, ST. PAUL.

IN the work of caring for the consumptives in county institutions, many questions of policy arise, both in handling the funds and in the management of the institutions, in order to obtain the best results for the taxpayers, who have supplied the money and which have to be accounted for by those officers of the state to whom have been intrusted the public funds appropriated for this purpose.

The community which says, "It is a good thing to have a sanatorium for our consumptive poor; come, let us build one," and, having built the institution, intrusts it to the nearest physician, without regard to his special fitness for the work, often becomes so dissatisfied with the results obtained that its members lose all faith in the sanatorium idea. The reason for their disappointment is not far to seek; the institutional care of a consumptive, to be successful, is a highly specialized branch of the practice of medicine, and cannot be acquired by the reading of many books. Every step in the location, planning, construction, and management of these institutions should be in the hands of experts, and should not be left indiscriminately to the county authorities or to the local profession, without the control of a board with state-wide responsibility. The duties of this board should not cease with the building operations, but should continue throughout the life of the sanatorium. Its powers should in some way be greater than an advisory board, and it should be able to see that its suggestions are put into effect. If this is not the case, an institution that has been properly launched can soon deteriorate to the level of an ordinary poor farm, and the patients suffer for the want of proper discipline, food, and medical attention.

The Minnesota law was drawn up very carefully by a committee appointed by the State Board of Health, of which the writer was a member. That committee attempted to draw a law which should avoid the dangers above enumerated. It intrusted the duties of supervision to a commission, already existing in the state, whose powers had been previously entirely advisory, and confined to the State Sanatorium for Consumptives. It is the duty of this commission, when a county or group of counties levies a tax for the construction of a sanatorium, to assist the local commission in the selection of a site, in the preparation of the plans and specifications, and in the erection of the proposed sanatorium. The superintendent of the new institution must be approved by the commission. The manner in which the institution is conducted is subject to scrutiny every month. The suggestions of the state commission can be enforced because the state of Minnesota pays half of the bills for the site, construction, and equipment up to $50,000, and after the institution is open the state pays on the order of the commission $5 a week for each charity case cared for. In this way uniformity in the general plan of the buildings, in the care and treatment of the patients, and in the records of the institutions is secured.

The county institutions are required to admit any resident of the county if he has pulmonary tuberculosis in any stage. The examining physicians of the State Sanatorium for Consumptives, at least one of whom is located in each county, will determine whether the patient has tuberculosis. The county institutions are particularly intended to care for the advanced case, and the law provides that advanced cases shall always be given preference over others on the waiting list. The incipient cases can be cared for at the state sanatorium, which is designated as a place where only incipient cases shall be treated. For that reason the smaller the district served by any county institution the better, because the friends of the patient will not have to travel so far to see him, which would not be the case if many counties joined together and the institution took patients from a large territory. The institution should be near the patient's home. To keep the institution full, any vacant beds are at the service of neighboring counties at a price sufficient to pay for the cost of maintenance.

The lack of uniformity in the conduct of county institutions in most states, especially since there are not a large number of men to be had who have had the advantages of training in sanatoriums for the care of consumptives, is greatly deplored. We who are interested in the success of the antituberculosis work should stand shoulder to shoulder in

[1] Paper read before the American Climatological Association, Atlantic City, June 20, 1914.

the demand that every institution must be under the supervision of competent men, even if it is not possible to put an expert superintendent into all of the smaller institutions. Some county institutions in the United States are so organized that no good can come of them, and the cause is sure to suffer if they are to go on and others are to be opened. There is too much laxity in the passing of antituberculosis legislation that has not been carefully considered from all points of view before it is brought before the legislatures. A concrete example is the following extract from the pen of Dr. J. H. Gifford, of Fall River, "Evolution of Policy Concerning Tuberculosis Hospitals" (THE MODERN HOSPITAL, February, 1914):

"The state Legislature of 1911 passed a law requiring each city having a population of 10,000 or over to construct and maintain a local tuberculosis hospital, toward the support of which, after its approval, the state agreed to pay practically the same amount that it expends in the support of the state tuberculosis hospitals already built. The cost of building these hospitals equals the whole expense of maintenance for about one and one-half years, so that the state practically sacrificed the full control of these hospitals to this cost of construction, which represents the state's share of the maintenance for three years. A feature of this law is that it gives no specification as to capacity, or location, or material, or equipment, or standard of management of such a hospital. It simply conditions the state support on the approval of the hospital by the State Board of Trustees of Tuberculosis Hospitals."

Dr. Gifford describes the predicament of Fall River, which city built its hospital, but failed to get the approval of the State Board of Trustees of Tuberculosis Hospitals, although their taxes go to pay for the tuberculosis hospital of Boston and the other cities of Massachusetts that have built institutions.

The Minnesota county sanatorium law, chapter 500, laws of 1913, is a sample of the best legislation to be found in the United States on this topic. Its practical application and the way it is working out are most gratifying. One year after it was approved, practically one-third of the counties of Minnesota had taken action, and before long there will be a sanatorium for advanced cases of consumption near every Minnesota home.

In a report recently made to the governor of Minnesota by Public Examiner Andrew E. Fritz on the state hospital for the insane at Rochester, it is stated that for the fiscal year ending July 31, 1913, the cost of raw food per patient per day at that institution was 15.3 cents. The gross expenditure for each patient for the year was $173.81. Products of the hospital farm amounted to $55,329.18.

The lunacy committee of the Pennsylvania State Board of Charities has announced that it will ask the next Legislature for appropriations for two new hospitals for the indigent insane—one in the southeastern and the other in the southwestern part of the state. The congested condition of the present state hospitals at Norristown, Philadelphia, and Pittsburgh is given as the basis for the recommendation.

BELLEVUE MEDICAL STAFF REORGANIZATION.

Board of Estimate and Apportionment Already Responsible for Many Reforms in Hospital Practice—Proposes Unique Staff Arrangement.

The Board of Estimate and Apportionment of New York City, under the direction of Mr. Henry C. Wright, has proposed a radical reorganization of Bellevue and the Allied Hospitals in matters concerning their medical service. After a thorough investigation of conditions as they exist, Mr. Wright has made a report that contains some of the most interesting propositions of modern-day medical service.

He begins his report by stating conditions in Bellevue as they exist at the present time. The medical service of the hospitals is divided into four parts. One part, or division, is conducted under the auspices of the College of Physicians and Surgeons of Columbia University; another part under Cornell Medical School; the third division under New York and Bellevue Medical School, and the fourth division is known as an "open division," wherein physicians may serve who are not connected with any medical school.

Some of the services are directly under the supervision of the hospital, such as the alcoholic department and the psychopathic, the school for midwives, the tuberculosis camp boat, and the pathological department. The house medical staff at the present time is practically under the jurisdiction of and is appointed by the medical school controlling each division.

In order to develop just what kind of service the sick poor of Bellevue are getting under present medical staff arrangements, Mr. Wright undertook some systematic inquiry, and in his report has shown in detail that the medical service of the hospitals is not what it should be, and he has found that a good many abuses exist, such as insufficient time given by staff members, insufficient attention to diagnosis of diseases, and want of proper interest as developed in the failure of staff men to call for or witness post-mortem examinations. He finds that house staff members and attending physicians have been discharging irresponsible patients at the request of influential friends, and he finds that the superintendent of the hospital has been confined to a mere perfunctory performance of administrative duties concerning the welfare of patients, and that the obligations of the hospital have been largely assumed by members of the medical staff, who have not always acted for the best interests of the sick. He finds that visiting staff members have too often left the responsible duties of medical ministration to inexperienced interns, and he finds that these interns, in their turn, have oftentimes discharged patients who should not have been discharged, because of the interest of the young men in a large number of more interesting cases. He finds that clinical histories have been so carelessly and inadequately kept that they have become of little value, and he finds that little or no scientific work has been done by the attending staff, because of the small amount of time they have found it expedient to give to the service. The report does not stop with complaints of poor conditions, but suggests a way out of the difficulty in the form of a complete reorganization of the medical staff. Some of the proposals follow:

PLAN OF REORGANIZATION.

1. Control to remain in a board of trustees, to which shall be delegated power to determine general matters and policies. Such board to appoint a superintendent for a prescribed period of years, who shall have full administrative control of the hospital and out-patient department.
2. Control of admissions, distribution, discharges, and social service to be under the charge of the superintendent.
3. Present medical board to be supplanted by an advisory committee

constituted as follows: the chiefs of the medical services, the chiefs of the surgical services, the pathologist, and the superintendent. Such committee to have no power other than advisory. (Four medical and four surgical services, representing three medical colleges and one open division.)

4. The out-patient department to be an integral part of the hospital, both from an administrative and a medical standpoint. The medical and surgical attendants of each division of the out-patient department to be appointed by the trustees on nomination by the medical and surgical chiefs of the respective divisions of the hospital and the advisory committee.

5. Each medical school to be required to furnish a continuous service by means of a paid chief of its medical and also of its surgical service; such chiefs to be paid in part by the medical schools, the city to pay one-half of the salary when such half does not exceed $2,500 per year. Heads of the fourth division to be nominated by the council of the academy of medicine and the entire salary paid by the city; such chiefs to be appointed for a term of years and to serve in the hospital, on an average, not less than one-half of each day. An age of retirement to be established. A service of attending physicians and surgeons associated with such chiefs to be provided for. Nominations of the attending staff for each division to be made by the respective chiefs of such divisions and by the advisory committee. Special services to be assigned to the various divisions for designated periods, with some possible exceptions. All nominations to be submitted to the board of trustees for approval.

6. A resident physician for the medical service and a resident surgeon for the surgical service of each division to be employed; one-half of the salary of such residents to be paid by the city and one-half by the respective medical schools. Appointments for such positions to be made for a specified term by the trustees on nomination by the chiefs of the respective services and the advisory committee.

7. Interns to be nominated by the advisory committee after an examination held by the committee, the form of which to be approved by the board of trustees. The appointment to be made by the trustees. The results of the examination to be made a matter of record.

8. The trustees to reserve the power to discontinue, for cause, the services of any medical officer, chief of service, resident or attendant physician, surgeon, pathologist, or intern, whether paid or unpaid; if paid, whether paid by a college or by the hospital or partly by both.

9. In the pathological department the salary of the director of laboratories to be paid by the city; his functions and duties to be as follows: (a) to have general supervision of all laboratories connected with the hospital and all the work carried on therein; (b) to keep all records of findings; (c) to perform or control the performance of all autopsies; (d) to control the use of all organs and tissues; (e) to direct the work of the pathologists assigned by the colleges.

Each college division to nominate a pathologist whose appointment shall be subject to the approval of the director of laboratories and the trustees of the hospital; the salary of such pathologist to be paid by the respective colleges, and to be not less than $1,500 per year; the entire time of these pathologists to be devoted to work at the hospital; the amount of teaching and research work to be carried on to be regulated by the respective colleges, subject, however, to necessary routhe work assigned by the director of laboratories.

Mr. Wright's report does not stop with the above recommendations, but goes into detailed explanation of all the reasons why the various propositions are offered, and, to further entrench the board's proposals of reorganization, the report contains an appendix of letters from a large number of eminent physicians and surgeons in this country who were asked for their opinions as to the wisdom of the various items in the proposed reorganization. Some of those whose opinions were asked are Dr. Charles H. Frazier, of Philadelphia; Dr. Frank Billings, of Chicago; Dr. Alexander McPhedran, Toronto; Dr. Rufus Cole, Rockefeller Hospital; Dr. F. A. Washburn, Massachusetts General Hospital; Dr. George Dock, Washington University, St. Louis; Dr. Alfred Stengel, Philadelphia; Dr. David A. Edsall, Boston; Dr. Richard C. Cabot, Boston; Dr. George W. Crile, Cleveland; Dr. Winford H. Smith, Johns Hopkins Hospital; Dr. Theodore C. Janeway, New York; Dr. George Blumer, dean of Yale Medical School; Dr. Henry A. Christian, Peter Bent Brigham Hospital, Boston; Dr. Simon Flexner, of the Rockefeller Institute; Dr. Graham Lusk, Cornell Medical School, and others. The doctors were by no means unanimous concerning the proposed reorganization. A majority of them believed in a paid medical chief of each service, but some of them doubted the wisdom of a partnership between the city and the medical schools. Some of the men thought all the administrative activities of the hospital ought to be conducted under the jurisdiction of the superintendent of the institution, and that the medical staff members were not in a good position to be charged with administrative responsibilities of any kind. Some of the men thought that, while faculty members of the medical schools should be appointed chiefs of the services, the schools themselves should have nothing to say about their appointment. Others thought the appointments should come directly from the medical schools, and that the trustees of the hospital should have no voice concerning them.

It will be interesting to watch the reorganization scheme of Bellevue because some very important problems will be solved.

NO LANGUAGE BUT A CRY.

Infants Whose Food Is Now Given Adequate Attention Must Also Be Comfortably Clothed.

It takes a baby lover, with imagination, to understand the needs of infants, and often those needs are sorely neglected, not so much from lack of affection, for of affection, of an uninformed kind, there is plenty; but the discomfort and ill-health extending far beyond babyhood, caused by ill-considered clothing and feeding, has added much to the sum of human misery, and misery in a class of the community which should, before all others, receive tender consideration, the class which is wholly dependent on its elders and has "no language but a cry."

Medical science is slowly—very slowly—teaching us something of the dieting of infants and young children. Now we know that cow's milk can be divided into its constituent parts and recombined in such proportions as to defy differentiation, on analysis, from human milk, and that doctors who have studied the question can prescribe a "milk mixture" suited to the digestion of almost any baby.

What has science to say about the clothing of infants? Very little. Partly because clothes are essentially woman's province, and few women have studied the question from the scientific standpoint.

Still there is that pitiful cry, the baby's sole method of indicating discomfort, as well as many other things. The uninformed, perhaps the average mother, picks him up, rocks him in her arms, pats him on the back and says, "There then." If that is insufficient, she rings the nursery bell and summons nurse. And all the time, maybe, baby is trying hard to let her know that the clothing selected for him is quite unsuitable, that the square he is wearing is sodden and irritating, that closely woven linen and bath toweling are entirely unsuited for his wear, and that if the grown-ups would only turn their attention seriously to the elementary requirements of babyhood, he would be a much happier and more contented little person.—*British Journal of Nursing.*

Hahnemann Hospital, Rochester, N. Y., has lately opened its new administration and maternity building. It is a thoroughly fireproof structure of three stories and a basement. The basement story is of stone and the other stories are of brick, with floors of terra-cotta. The roof is covered with tarred paper, which is coated with slag. All partitions are of hollow brick. The outside walls are lined with furring, to do away with dampness. In the basement are an emergency room, a nurses' dining room with accommodations for sixty persons, a serving room, a plaster of paris room, and three other rooms that can be used for any purpose desired. From this entrance patients can be taken to the emergency room, or, by the elevator to any floor. On the first floor are the administration office, the superintendent's office, the doctors' waiting room, the dispensary, two private rooms, sitting room, sleeping room, toilet, porch, etc., for interns. The entrance to the interns' room is by way of a private hall. The second and third floors are for maternity cases. There are a delivery room, nurseries, sterilizing room, bath rooms, closets, cupboards and the like for the care and comfort of patients. The architecture of the building is colonial. The interior finish is of quartered oak of a dark shade, with brass trimming. Each room is thoroughly ventilated. Heat is supplied from the hot-water plant in the basement of the ambulance barn, about 250 feet distant.

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Hospitals Are Standardizing Themselves.

Four years ago Dr. H. B. Howard, in his address as president of the American Hospital Association, at St. Louis, begged for improvement in hospital conditions and urged elevation in standards. In June of that year, preceding the September hospital meeting, the American Medical Association also met at St. Louis, and a petition was presented to the house of delegates asking for the creation of a section on hospitals, avowedly for the purpose of stimulating the medical profession to a more acute and effective interest in hospital activities.

It seemed at the time that Dr. Howard's plea had fallen on deaf ears, and the American Medical Association declined to create a hospital section on the ground that no convincing reason for it had been shown. But during the following year the members of the medical profession were thinking and the result was that at the Los Angeles meeting, the following year, the section on hospitals was created by unanimous vote of the American Medical Association delegates, although no petition was presented, and only one medical man, who happened to be also a hospital administrator, was present at the meeting to present the matter.

Then began a movement to investigate the hospitals of the country with a view to setting some standards along lines of progress, but there was not a whole-hearted unanimity in favor of such investigation. Some of the hospitals set their disapproval on the proposal in no uncertain way, and declared that they would not have the privacy of their institutions invaded. Not only was there an open fight against the proposal—every effort made to bring the movement to a constructive point was met by unseen, silent hindrances. A proposal to get government sanction and support for the proposition "died abornin'." Agencies that seemed almost ready to advocate and go into the work suddenly became apathetic, if not actually antagonistic. The result was that no workable scheme for investigation and standardization was set in motion.

But the movement itself, like all good things, grew out of its own merit. Medical men began to think, and to write, and to talk. They began to look closer into the workings of their own hospitals and to insist on improvements here and there—in equipment and in methods. Trustees who had theretofore been complacent and self-satisfied began to wonder and to ask questions. Then the inevitable happened—the people began to wonder about hospital conditions, and to make inquiries before they permitted themselves to be taken to a hospital. The people began to study about hospitals, and to ask their doctors about certain methods of hospital procedure; they began to absorb a good deal of correct information about modern medical methods and the present state of the science as it was developed in the hospital care of patients—and, better than all, they began to be discriminating about the relative merits of hospitals for purposes of caring for their sick. This attitude, in turn, had a good deal to do with the sudden interest of some of the doctors, because the people began to wonder if the ability and up-to-dateness of their doctor had not some relation to the up-to-dateness of the hospital in which he practiced. Latterly, people are beginning to value a doctor's qualities somewhat by the character of the hospital to which he belongs; and so, by a little every day, there has come a stimulus, from many directions, that has resulted in a taking of stock of themselves by the hospitals.

More specifically, health activities in various of the more progressive communities began to take on the character of coordination. New York was first perhaps to assemble these activities. The association of a few hospitals to formulate a uniform system of accounting had already borne fruit. Then came the purchasing bureau as the result of the interpretation of the work that had been done in connection with bookkeeping and the wastefulness of individual enterprise shown therein; then followed the Conference of Hospitals, a splendid, working force. The Saturday and

Sunday association, with its large purse and rigid requirements, followed. The governing bodies of the city and state took up the work, and under the masterly lead of the board of estimate and apportionment, and Mr. Henry C. Wright, is going far in the solution of problems affecting not only public, but private institutions, in matters economical, social, and sociological.

Philadelphia has grouped fifty-five of its hospitals into a coordinate scheme, having for its special object the cutting down of community expenditures for hospital and allied purposes, and raising standards of service.

Cleveland came next with the added feature of centralizing the collection of money for all health activities in the hands of one of the recognized and respected civic bodies, with power to prohibit the collection of funds without authority.

Many cities have begun along similar lines, and doubtless before long many coordinated bodies will be at work in every large community, each body with its own special service, but all participants in an organized, homogenous scheme of health betterment.

Thus we find that, though standardization failed for the moment, or at least failed to work out in the prearranged way, yet the real purposes are in course of achievement along educative, constructive lines. truly "The Lord doth work in devious ways His wonders to perform."

Dr. Smith's and Miss Greener's Papers.

With this number of THE MODERN HOSPITAL the two series of papers, the one by Dr. Winford H. Smith and his associates in the Johns Hopkins Hospital, and the other by Miss Elizabeth A. Greener, of Hackley Hospital, have come to an end.

Letters of thanks and commendation and of congratulation have come to THE MODERN HOSPITAL about these papers—thanks for their helpfulness, commendation because they are the first coordinated and connected stories of the daily routine practices of two representative hospitals of their type ever published, and of congratulation for the inspiration that led to their publication.

In a few of the letters it was urged that these two hospitals were not fairly representative of their types, and that because of their splendid endowments they were in position to accomplish things that other—and struggling—institutions could not hope for.

This is fundamentally the reason why Johns Hopkins and Hackley hospitals were chosen as examples, and why Dr. Smith and Miss Greener, after much urging, were prevailed upon to prepare the papers—to show, not what might be done in hospital administration under stress of the financial struggle common to the great majority of American institutions, but how things were actually being done in two institutions, representative of their class, where efficiency could be held paramount, unfettered by financial limitations.

There is an editorial in another column of this issue showing how the hospitals of this country have begun to standardize themselves in the absence of the stimulus of investigation from the outside and the setting of standards based on such investigations.

The writer of this editorial, on the firing line of the movement to standardize hospital efficiency since the active propaganda began, had come face to face with almost insuperable obstacles to the investigation of the hospitals by classes, and nearly a year ago recognized that the work, if it was to meet with even partial success in the near future, must be commenced in another direction, and he believed this purpose would be best served by presenting to the hospital people some examples of routine hospital practice that might furnish inspiration and comparison for those who were really eager for improvement. The results have been far greater than the instigator of the scheme even dared to hope.

And now to obtain the greatest possible benefits from these papers. They are not to lie unemployed and unconnected in past volumes of THE MODERN HOSPITAL. They are to be assembled and bound in enduring form, so that they may be kept on the desks of hospital workers for daily reference.

The papers from Johns Hopkins Hospital were prepared by the heads of the various departments of that institution, whose activities were under discussion, men and women chosen for their peculiar fitness for the service involved, and trained by Dr. Smith and his medical advisers to the highest degree.

Unfortunately for her, considering the vast labor involved, Miss Greener was obliged to prepare all her papers herself. But there was an advantage in this, because all the subjects could be interwoven and made integral parts of one complete machine to a degree hardly possible in so large and complex an institution as Johns Hopkins Hospital.

These two series of papers are epoch-making, and will stand for a long time as the high watermark of institution efficiency—the one for the large general hospital, and the other for the small general hospital. THE MODERN HOSPITAL congratulates itself that it was the inspiration for their preparation, and the vehicle for their pub-

lication to the hospital world, and THE MODERN HOSPITAL, believing that it voices the feeling of conscientious hospital workers everywhere, begs to extend the sincerest thanks to Dr. Winford H. Smith, his associates, and Johns Hopkins Hospital, and to Miss Elizabeth A. Greener and Hackley Hospital for the most practical pronouncement on hospital administration that has ever been published.

JOHN A. HORNSBY.

Nursing—and "The Modern Hospital."

The nursing problem in this country is a large and broad one. There are many details not yet settled—else it would not be a problem. Good nursing is a vital factor in good hospital service; to that extent THE MODERN HOSPITAL is deeply concerned about nursing activities. But THE MODERN HOSPITAL has no settled convictions on the mooted points of nursing ethics; indeed, its own editors do not see the details exactly from the same viewpoint. Because of this fact, every article and every editorial that has been published on nursing has been signed by the individual editor or contributor who wrote it, and this will continue to be the case. It would seem that this policy ought to leave THE MODERN HOSPITAL an open forum for the publication of every worthy opinion on nursing ethics and nursing ideals; indeed, at the time that announcement was made of Miss Riddle's consent to become editor of the Department of Nursing, this attitude was clearly stated, and everyone interested in nursing was invited—in fact, urged—to contribute his or her opinion, so that we might arrive at conclusions by frank discussion.

But in regard to one phase of nursing THE MODERN HOSPITAL has some very settled convictions, and concerning these all its editors are of one mind, and on this phase it has a definite policy. Briefly, its *credo* may be summed up as follows: we believe that there are some little misunderstandings extant that have grown by aggravation until they seem very large and very serious; but we do not believe that they are in reality either large or serious; and we believe that friendly discussion, even if it should happen to take the form of the Irishman's picnic, where every head was hit, will eventually settle everything right.

It was in this serene belief that we asked Miss Riddle to guide the Department of Nursing, and we promised to give her a free hand. We have not only done so, but we are still glad to do so. Miss Riddle has brought many friends to THE MODERN HOSPITAL—friends that are well worth while, and whose friendship and good offices are to count in the final attainment of a universal harmony on points that now seem sore and irritated.

We are nearer to a perfect understanding today than we were a few months ago, and it is on such level-headed, sensible women as Miss Riddle, Miss Nutting, Miss Noyes, Miss Crandall, Miss Cooke, Miss Parsons, and their associates, that we may rely for many wholesome adjustments in the future.

That there are radical opinions on some nursing points is not to be denied. Some of this radicalism is mere zeal, some of it is misjudgment and a narrow viewpoint, but a separation of all the forces consecrated to the service of the sick into two hostile camps, each with a battle cry of "No quarter!" is not likely to cure anything. Indeed, there would be scars left that would cripple the usefulness of every participant for many a long day; that would hurt scientific progress in medicine, hurt nursing, hurt the hospitals, and through these hurt mankind. If we are to fight, let it be shoulder to shoulder, against that dreaded trinity—Disease, Ignorance, and Crime.

An Inspiring Contract.

The mayor of Boston has recently directed the trustees of the Boston City Hospital to work out a program of expansion and improvement of that institution to embrace the next twenty-five years.

This is precisely as it should be, but almost uniformly is not; very generally it is the custom of hospital trustees, at least in this country, to build just what is needed today, without any reference whatever to the future, and without even planning the building so that additions can be made in a homogenous way to admit of economical and practical administration.

It would seem to one who has given some study to hospital conditions and possibilities that this Boston board has a most inspiring and interesting piece of work cut out for it. Hospital activities, if not yet maturely standardized, have at least taken on a trend and a direction that holds a very strong portent for the future. At the Boston meeting of the American Hospital Association last year Mr. Bradley, in his instructive paper, gave some figures covering a limited area in Massachusetts and a limited time, which showed that only 11 percent of the sick who were under a physician's care went into a hospital, and similar figures were cited showing that for the same period only 13 percent of the sick people of Birmingham, England, one of the best hospitaled cities in Europe, went to a hospital.

And yet it has come to pass that a person really sick cannot have the best care known to medical

science anywhere but in a properly equipped and well-managed hospital. Bedside diagnosis, we recognize now, must fall far short of what we can do to determine the nature of the patient's disease; we need the laboratory of pathology, and the various agencies available therein; we need the x-ray apparatus; and we not only need these adjuncts, but we require that they shall be manned by specially trained people, whose business it is to not only read their findings, but to interpret these for the benefit and aid of the clinician. And after the diagnosis has been made we need one or more forms of the vast aggregation of apparatus devised for treatment, and which can be assembled only in a hospital. The complicated machinery necessary in the diagnosis and treatment of disease, it is obvious, is not to diminish in quantity or character, but must grow even greater, and must require for its operation increasingly greater technical skill.

Even if we are to stop short with the definitely sick man, woman, and child, it must be patent to all thinking people that the hospital must eventually become a necessity to every member of every community, and, if only 10 percent of the sick now go to the hospital, there must soon be ten times the present number of hospital beds.

But we assuredly are not to stop with the sick who can be benefited under present medical knowledge. Diseases that were incurable a few years ago are now under scientific mastery, and the number of these is increasing rapidly. Defectives, deficients, the insane—every form of human imperfection, mental, moral, and physical—all these are under scrutiny by the ablest minds of the day, aided by every device known to science and art. Huge numbers of people who now hobble haltingly through life, with a handicap they cannot carry, are being set upon their feet, their handicap removed, and their lives freed from the inequality of the struggle. The criminal of today, the moron, the defective, the irresponsible, are to be hospital patients tomorrow, and the workshop of the master craftsman is the modern hospital.

But even here the beneficence of the hospital does not cease. The burdens of poverty, the wasted effort of the inefficient, the hard hand of power bearing upon the weak—all these unevennesses must be studied and corrected, and the hospital of the present must be the school and the clearing house of the future.

The hygiene, the sanitation, the cleanliness, the physical right living of all the people must be looked after, and the teacher must work out from the hospital, where the tools are kept and their uses taught. Out-patient and visiting nurse service, the community paid health officer—these are today merely a hint of the future.

The Boston City Hospital board has been cleared for a momentous voyage; it must explore the future, not for its own institution alone, but for all of us. Hospitals the world over are interested in the voyage. May the pilot be sober and watchful! May the helm be in a steady hand, with a far-seeing eye to guide it!

Sanatorium Progress.

Not long ago a faithful representative, in whose word we trust, made a pilgrimage among the leading general sanatoriums of the country. He found much to commend; and returned to the fold, convinced that these institutions are throwing off their reputed bad manners and traditions, and are coming back to the practice of scientific medicine. A few years ago some of the stories about sanatoriums were not pleasant to hear—there used to be talk of questionable ethics and dusty morals. Even the much-debated "fee-splitting" was charged against a few. Our ingenuous pilgrim thinks that this is now unfair—is a false charge. Apropos it is interesting to observe that at a recent meeting of the Monroe County Medical Society held in Rochester, N. Y., that charge of fee-splitting by certain "institutions" was revived. Statistics gathered by a committee of the society seemed to bear out the charge. Now, fee-splitting—called "graft" by the uninitiated and "the buying and selling of patients" by the purist—is an intricate game. It is ingeniously defended by sophists. At the Rochester meeting certain declamatory letters from anonymous correspondents proclaimed the *virtues* of fee-splitting. One writer passionately asserted that no law of ethics or of morals could hinder his doing as he pleased with his own hard-earned dollars. That is an old and a mighty contention—known even to the wits of the scriptural great men. Who, indeed, shall prevent we lest I do what I will with mine own? In some broad and easily comprehensible sense it is still today the contention of certain employers of labor. The labor unions maintain the reverse, while Congress and president applaud. But our fee-splitting colleague operates in a more restricted field. His activities—his buying of patients—are characterized by the scrupulous as "bribery." That is an ugly word, seriously to be considered by our business-like anonymous colleague. It is not the *surgeons* alone who offend in these matters. Earnest inquirers struggling amid the mysteries of business-like methods, are heard to whisper cautiously that *family doctors* are the more to blame. To the Philistine their profit is known as a "rake-off," and their subter-

ranean processes are stigmatized as "blackmail." These be soul-stirring phrases. Are the critics, indeed, "muckrakers" and "soreheads," as the business-like assert? But these are "personal" and "private" matters. Meantime, let it not be said that private hospitals and sanatoriums enter on the devious path. That easy descent to Avernus may not readily be retraced. The besmirched "institution" is besmirched beyond recall. Cæsar's wife must remain spotless from the world.

There are other tales—many of them pleasing tales, laden with which our faithful representative returns. Upon such tales later we may comment.

J. G. MUMFORD.

Home-Made Hospital Appliances.

In this number of THE MODERN HOSPITAL will be found articles on "Home-Made Appliances for Hospital Use." Some of the finest economies in present-day hospital practice are due to the invention of hospital workers themselves. It is not every one who has the knack or the mental attribute of invention, but a great many hospital people have it in a well-developed state. Hardly one of us ever goes into another hospital but he sees something new and instructive in the way of a home-made appliance of some sort for some purpose. Not always are these suggestions usable in their present form, but they very often contain hints for the solution of some problem if the observer has an inventive mind.

THE MODERN HOSPITAL wants to encourage the invention and use of home-made appliances, and to that end will be more than glad to publish photographs and descriptions of new ones every month. If all the hospital people will send in pictures and accounts of their own achievements in this line, every hospital will be profited thereby. Not all the things necessary to do all the work in hospitals have been invented yet, and the crude, improvised piece of mechanism of today may be "standard" apparatus tomorrow. That is how nearly all standard equipment began.

Let everybody contribute something to this most interesting and instructive department.

The Kansas City General Hospital.

We are wondering if the newspaper and other reports are true to the effect that the Kansas City General Hospital, that had given such promise during the past two years of becoming one of the really good municipal hospitals of this country, is to become again a part of the political spoils system of that city?

We are informed by the newspapers that Dr. R. E. Castelaw, who had retrieved the hospital from a position at the very depths of inefficiency, and brought it during his two years' incumbency abreast of the foremost of its kind, had been asked to resign, and that a successor had been appointed.

The people of Kansas City have expended $750,000 on their new hospital, and it had been an object of pride to them under Dr. Castelaw's administration. It cost last year $157,000 to operate the new and old hospitals, but more than 6,000 of the city's sick poor were cared for within its beneficent doors.

It is scarcely believable, in view of these facts, that any political administration would be willing to incur the ill will of a charitable public by consigning an institution with such splendid possibilities and such fine achievements, and in which the people had already shown so vital an interest, to its old position as a factor in the political spoils system.

Not so many years ago a public hospital could be operated as part of the spoils politics with impunity, but that time has gone by, and it is written large in the signs of the times that the people of Kansas City will not, without protest, allow their splendid hospital to again slip back into the mire.

More than one city administration, within the past few years, has paid the penalty of despoiling a public hospital dear to the people, with its life.

A Printer's Blunder.

An editorial was published in the June number of THE MODERN HOSPITAL commenting at some length on the paper, supposed to be published in the same number, by Miss Felter on "Operating Room Rules in the Royal Victoria Hospital." Unfortunately the paper itself, due to one of those inevitable shiftings in the make-up that will sometimes occur in the best printing offices, was left out. It is published in this number, and is recommended for careful study, especially by surgeons, interns, and surgical nurses. There is a great deal of meat and some things new in Miss Felter's rules.

Our July Cover Design.

Our cover design for this month is an illustration of Mount Zion Hospital, of San Francisco. As stated in the beginning of the article describing this hospital, the construction of the building was arranged to meet the twofold object of the institution—the maintenance of a free clinical department for the needy sick and a private department designed as an aid to defray the expenses of the former.

CURRENT HOSPITAL LITERATURE

Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

The Nursing of Children. Minnie Goodnow and Zula Pasley. Trained Nurse, New York, 1914, LII, 279.

In a series of papers the authors treat of communicable diseases and tell how the nurse may avoid contracting and carrying infection. Everything should be kept out of the mouth, and especial care exercised in the use of an individual drinking glass. The nurse should not kiss a patient, should keep out of doors as much as possible, and always sleep with an open window. The hands should be washed before and after eating, and always after handling the patient. Avoid the patient touching her face, or coughing and sneezing in it. Eat nothing a patient may wish to give, and in eating or drinking use only the nurses' dishes. Gowns or change of uniform should be put on in going into a ward, and always wash the hands on leaving it. Infectious diseases are contracted and carried by contact and not by air infection.

How Can the Construction Costs of Large Hospitals Be Reduced (Wie können die Baukosten der grossen Krankenanstalten herabgemindert werden)? H. Winterstein. Heilanstalt, Leipsic, 1914, IX, No. 6.

For small hospitals of from 12 to 50 beds the costs of construction amount at present to 2,000 to 3,000 marks per bed, for hospitals with 50 to 500 beds they reach as high as 6,000 marks ($1,500), while very large hospitals cost from 6,000 to 12,000 marks ($1,500 to $3,000). In general it may be said that the more expensive construction requires smaller sums in conducting the hospital. The principal reason of the increased cost lies in the general hospital plan. After 1870 there was a tendency to erect a great number of small buildings. The Virchow Hospital, for instance, consists of 57 small buildings; there is a house for every 35 beds. There is now a reaction against such an extreme decentralization. We can even reduce expenses by merely building two houses together, and still greater is the reduction if, instead of one and two-story structures, we erect buildings of several stories. The basements, too, can be put to a better use than is done at present. Instead of erecting separate buildings for kitchens, laundries, bath houses, etc., the basements could be used for such purposes.

The Out-Patient Department of the Henry Phipps Psychiatric Clinic. C. Macfie Campbell, M. D. Johns Hopkins Hospital Bulletin, May, 1914.

This is a paper read by Dr. Campbell, who is associate in psychiatry at Johns Hopkins Hospital, before the Baltimore City Medical Society. It was the author's intention to give a running story of the work of the dispensary in the new psychiatric department of Johns Hopkins since its opening, just a year ago. For purposes of a concrete story, the author took 50 consecutive cases treated last January out of the total of 543 cases treated during the year. "Of these fifty patients," writes the author, "13 were children, 7 were adults with marked constitutional mental defects, 16 presented symptoms either of a recognized type of psycho-neurosis or of a well-defined invalidism, 4 were cases of dementia precox, 5 had organic brain disorder, 1 had manic-depressive insanity, 1 patient was an epileptic, 2 were unclassified on the ground of insufficient data for diagnosis, chiefly on account of difficulty of language; in one case the symptoms did not go beyond the limits of a normal depression." The author goes into a most interesting and profitable analysis of these cases.

A Model Hospital. Australian Nurses' Jour., Sydney, 1914, XII, 51.

The new King's College Hospital at Denmark Hill possesses features that are especially adapted to the convenience and welfare of nurse and patient alike. Especially desirable features are the following: the large dining hall, with sliding panel into the serving room; the nurses' bed room, with wardrobe and drawers built into the wall; the washstand of marble slabs fitted into a corner, easily cleaned and open below, with walls covered with paripan; a bath room to every 8-bed room; a bell on every floor, rung from the matron's department on the ground floor; rows of hot pipes on which bed pans rest; hot-bottle tank outside each ward, heated by steam, the bottles kept permanently filled with hot water; fresh air, without drafts, from patients' windows opened top and bottom by pulling the handles, and even when closed allow fresh air between upper and lower sashes; windows revolve outside in for cleaning purposes; all corners rounded; the tops of bath fixtures of china, and all door handles, plates, etc., of aluminum. The matron has a private flat, equipped with automatic telephone connecting her with any department. These and other labor-saving devices will commend themselves.

Infant Mortality in the Philippine Islands. W. E. Musgrave. Philippine Jour. of Science, December, 1913.

This paper is a study from the department of medicine of the College of Medicine and Surgery in the University of the Philippines. The writer begins his paper with a statement that infant mortality in Manila is greater than it is in any other city of which we have records. He does not think that this fact is due to any single cause or to any special conditions in the country, but that it is due to artificial causes, some of which are prenatal and some post-natal; that heredity as to tuberculosis, syphilis, and other transmissible diseases plays a large part. He proposes to amend the situation at least, if not cure it, by attention to food for adults and children and milk foods for infants. In regard to this last he thinks that pasteurization entirely fails unless the after-care of the milk, especially in regard to temperature, is rigidly observed. The writer discusses the milk of the carabao, goat, and cow, as it is marketed in the streets of Manila. He says it is usually thirty-six hours old, is diluted with tap water or worse, and has been collected and transported in filthy receptacles after having been drawn from unclean animals by filthy persons; but for all these faults the writer is not at all impressed with the virtues of pasteurized milk, in which he thinks the multiplication of bacteria after pasteurization is so rapid that within a few hours the milk is almost or quite as dangerous as though the

process had not been employed. He is quite sure that the present cure for bad milk conditions, at least for the present, lies in perfect sterilization—that is, destruction of all animal and vegetable life by boiling.

Forty-Fourth Annual Report of the Inspector of Prisons and Public Charities upon the Hospitals and Charitable Institutions of the Province of Ontario for the Year 1913. 135 pp., 8vo, Toronto, 1914.

The province of Ontario has at present 89 public hospitals, including 12 sanatoriums for consumptives, 57 private hospitals, 37 houses of refuge, 33 orphanages, 3 homes for incurables, and 3 convalescent homes. Ontario has made a remarkable progress in this field during the last twenty years. While the province spent only $321,473 for hospital maintenance in 1893, the expenses amounted to $1,971,577 in 1913. This is a splendid testimony of the public spirit and the philanthropy of the people of Ontario, and not without reason Sir William Osler, in his address before the British Hospital Association, referred to the hospitals of Ontario as model institutions. Undoubtedly one of the finest hospitals on the western continent is the great Toronto General Hospital, which has just been completed at an expense of $3,500,000, and which has room for 700 patients. It is of general interest to learn that the report calls attention to the fact that a large number of undesirable and unsuitable immigrants have become a public charge on the hospitals and public charities of Canada. As the number of this class of immigrants is relatively much greater in the United States, it would be interesting to know to what extent the public hospitals and charities are affected by this class of immigrants.

Hospitals and Medical Instruction in Shanghai (Les hopitaux et l' enseignement de la médecine a Shanghai). Paris Médical, 1914, IV, No. 16, Suppl.

Shanghai, with its fine hotels, its splendid palaces, its luxury, looks like a European city transplanted into the Orient. It has over 800,000 inhabitants, among whom there are about 15,000 Americans and Europeans. The city owes its marvelous progress to the activities of the foreign residents. Shanghai has 17 hospitals, all established and maintained by Americans and Europeans. From 5,000 to 6,000 patients are cared for every year in these hospitals. The author describes only one of these institutions, Saint Mary's Hospital, which was established six years ago by French missionaries. It consists of three rows of isolated pavilions surrounded by extensive gardens. Both European and Chinese patients are admitted. The patients are divided into three classes. Those of the first class, which consist almost entirely of Europeans, have single rooms. Patients of the second class are placed in rooms with two or three beds, and those of the third class, who pay only 50 centimes (10 cents) per day, are placed in rooms with 5 or 6 beds.

The Community's Right to Health Protection. A. H. Gladden, M. D. A paper read before the Health Conference of Local and State Officers, New Orleans, April 20, 1914, and published in the New Orleans Med. and Surg. Jour., May, 1914.

Dr. Gladden thinks the community has a right to health protection because the greatest asset to any community is the health of its citizens. He thinks that local boards of health—parochial, municipal, and state—are all well enough in their way, and that, working hand in hand, they can do some good even as their affairs are now conducted; but he thinks that "if such men are employed at a salary commensurate with the service expected and demanded, and they will devote their entire time to matters pertaining to the public health, the community will have made the very best step toward the betterment of health conditions. He thinks the public should be protected against quacks, against the sale of "cure-all" patent medicines; he thinks that a board created and conducted on a basis of payment of salaries to the officers would do great good in preventing epidemics of typhoid fever through bad drinking water, and that it would be an effective factor in maintaining quarantine regulations; that it could go far to prevent interstate "common carriers" from being a menace to the health of the traveling public; that it could be a real influence in the enactment of reform legislation in relation to health matters, that it could effect local sanitary legislation, that it could, by careful analysis, unearth causes of local epidemics and put the machinery into motion for their suppression, and that it could eventually greatly reduce the death rate.

A Public Welfare Department—Its Proper Relation to the Hospital Under the New Charter. Otto P. Geyer, M. D. Cincinnati Lancet-Clinic, April 25 and May 2.

Dr. Geyer arraigns the community in which he lives, and indirectly every other community in the country, on the score of its "gambling with human life." He presents a formidable list of the things that the community has failed to do for its dependent members. "Thirty-five thousand of our fellow citizens," he says, "are more or less dependent yearly (this is in Cincinnati alone); 8,000 of them require free medical care at the city hospital; 2,860 children were deserted in one year; 1,490 children were officially before the juvenile court in 1912; collectively the 3,000 or more men committed to the workhouse in 1913 wasted approximately four hundred years of their existence behind the bars of that institution. This waste of their opportunity and their time cost the city $30,000 alone in the community's workhouse. One hesitates to calculate the economic waste to the city in loss of their productive labor, to say nothing of the misery occasioned their families. Eight thousand infirm, aged, and cripples daily required the city's charity at the infirmary." Then the writer proceeds to suggest a series of remedies, which he sums up and makes into concrete form in the shape of an organized body whose component parts shall contribute toward a common service to these various classes of dependents.

The Nutritive Significance of Different Kinds of Food Stuffs. Lafayette B. Mendel, Ph. D. New York Med. Record, April 25.

Prof. Mendel's paper was read before the New York Academy of Medicine in March, and was part of a symposium on foods, in which Dr. Graham Lusk was another participant. Dr. Mendel's paper goes into the question of primitive foods by people of the dark ages, and leads, step by step, down the ages, showing how various foods came into use and the evolution through which they passed to the present methods of their preparation. The writer then takes up different kinds of food and discusses each, by classes, in a most interesting and profitable manner. For instance, in regard to the banana, he says: "In the undervalued and maligned banana we have an example of what ignorance and improper habits of eating can do to detract from the deserved popularity of a wholesome food. Bruised, damaged, and exposed to decay by improper methods of marketing and serving, though nature furnishes the banana in a sterile package; eaten before it is ripe, because the green fruit appears more attractive to some; insufficiently masticated by many, though rarely by untutored children; this delicious fruit has acquired an

unmerited reputation as an indigestible offender. The real culprit is man, not the banana; and why he should disdain a raw potato or a green apple, yet attempt the alimentary conquest of an unripened, indigestible, starchy banana instead of the duly ripened, sugary fruit, and then expect comfort, is a mystery." The writer discusses sugars, cheese, milks, the mushrooms, fruits, and a wide variety of other commodities which make up the daily fare of civilized people. The paper is a most entertaining and instructive one.

Diseases Liable to Be Met With in Mexico and the General Methods of Combating Them. Major Weston P. Chamberlain, Medical Corps U. S. Army. Jour. Roy. Serv. Inst., New York, 1914, LIV, No. 189.

In his recent paper before the officers of the Fifth Infantry, Major Chamberlain claims in a campaign from Vera Cruz to Mexico City practically all factors harmful to health known to temperate and torrid zones are liable to be encountered. There are three different climatic zones in Mexico—the warm, tierra caliente; temperate, tierra templada; and tierra fria, or cold zone. The tierra caliente, or warm, covers a territory from sea level to an altitude of 3,000 feet, best exemplified by a low, hot, damp, marshy, and unwholesome region along the gulf coast. In this zone is Vera Cruz. The temperature varies from 77° F. to 82° F., seldom falling below 60° F. and often rising to 100° F. Malaria, dysentery, and yellow fever prevail. Typhoid is a continued fever there, lasting on an average three weeks, and in about 50 percent of the cases there exists diarrhea.

Until recently the existence of typhoid in the tropics was thought rare or unknown, but investigations of the last ten or fifteen years in India, Panama, and the Philippines have proven the disease widely prevalent among both whites and natives in hot countries. It becomes one of the most serious diseases encountered by an army operating in the tropics. Not even a previous attack will render a person immune. While the use of the antityphoid inoculation has greatly reduced the number of cases in our army and navy, it is not to be considered an infallible protection, and should not lead to the neglect of well-known sanitary precautions that help check the development and spread of typhoid fever. The writer specifies that this observance is all the more important because these same sanitary precautions, which are useful against typhoid, are equally efficacious in preventing the development of epidemics of dysentery, diarrhea, and cholera, three very deadly enemies to armies.

Dysenteries are frequent, especially the second type, known also as amebic dysentery, because it is produced by an ameba, which, while not a bacterium, is a protozoan, a low form of animal life; and this disease is also known as "chronic dysentery." All the diseases referred to—namely typhoid fever, dysentery, diarrhea, cholera, and Malta fever—belong to a class the causative agent of which gains entry to the system through the mouth. Another class of diseases to command attention are those contracted by the bites of insects, the most common and important of which is malaria. Dengue or break-bone fever, hookworm infection—often contracted by bathing or wading in muddy, stagnant water—dhobie itch, and plague also fall under this class, to guard against which the most rigid sanitary rules should be observed. Major Chamberlain lays special stress on the venereal diseases, leprosy, yaws, sore eyes, and tropical ulcers that exist among a low order of the people of Mexico, an association with whom our soldiers would do well to avoid. He advises good care of the soldiers' feet, and prevention of ringworm, ground or toe itch, and tetter, a well-known foot disease. While nostalgia, or homesickness, comes to the unfortunate soldier who indulges in dissipation and forms association among low, immoral classes, he believes if strict attention is paid to the laws of hygiene, and sanitary regulations are observed, a normal mental attitude will prevail. Accounts heretofore given along these lines, the writer thinks, have been greatly exaggerated, and the effects of tropical climates on the nervous system do not differ from the effect on troops within the continental limits of the United States. The issuing of necessary sanitary instructions he does not consider sufficient. Every individual, from the highest to the lowest, must see that such instructions are carried out to the letter by himself and by others. That attention to the rules of advanced tropical sanitation can protect the health of large bodies of men is shown by the remarkable success that has attended the efforts of military authorities in Panama, which only a few years ago was considered to be the graveyard of the white man.

A Novel Combined High-Pressure Sterilizer and Hot-Water Fountain. Roy Huchnell. Australian Med. Jour., Melbourne, 1914, III, 1511.

Impressed with the inconvenience, waste, and comparative inefficiency of most sterilizers in use at private and many public hospitals, the writer has invented a sterilizer of two cylinders of sheet copper, nickeled in and out, with flanged brazed joints, capable of withstanding high pressure. The bottom of one is level with the top of the other, so that water can flow by gravity, and they are carried on white stone enameled supports as all other such vessels. The higher tank is fitted with a steam pressure gauge and safety valve, both tanks possessing water level gauges and draw-off taps. Above them is an air compensation pipe with cotton wool air filter, the only ingress point for air, which allows water to flow over when required. A big Fletcher burner, with a pilot, is placed under the cylinder and burns about 30 feet of gas per hour. In his apparatus this cylinder has a capacity of 8 gallons. A steam pipe leads to two coiled worms contained in two vessels on the left—the one perforated, with trays and baskets; the other simply a big shell. Into the former are put the instruments, sutures and dressings, basins, swabs, towels, aprons, and caps. On the wall is a Berkfeld filter, all water flowing into the upper tank from the main passing through this. Pipes lead to wash basins, providing hot and cold water for handwashing. The inventor claims for his sterilizer absolute safety, to be blown off at six pounds above atmospheric pressure, though the boiler has been tested to 20 pounds to the square inch, giving a half hour's exposure to 230° F. It has been in use for a year, and has given clinical tests of 100 percent of recoveries in major surgery. The cost of the installation is about $300. The article is illustrated by a splendid diagram.

General Memorial Hospital for Treatment of Cancer and Allied Diseases.

The Medical Record notes the gift of nearly $500,000 to the General Memorial Hospital from Dr. James Douglas, the conditions being that the entire medical as well as research staff shall be under the control of the medical department of Cornell University in New York City, thus insuring close cooperation between clinical and laboratory investigation of the cancer problem. At the laying of the corner stone of the institute, May 17, 1884, Dr. Wm. H. Draper stated "the highest object with which a hospital can be founded is not simply to provide for those whose means are inadequate to command them the benefits of the

best medical and surgical skill, and the best nursing; the higher purpose is to give the best possible opportunity for the scientific investigation of the causes and the treatment of a disease which has thus far baffled human insight and human skill." Other munificent gifts for this institution have come from Mrs. Huntington, who in 1902 contributed $100,000, to be known as the Collis P. Huntington Fund, to be invested and kept invested, the income only to be used. The general plan is similar to that of the Middlesex Hospital, London. The hospital now has a moderate supply of high-grade radium, and a larger amount of low-grade from which the emanation is used. A further supply up to 3 grams is expected from the Colorado mines of Dr. Douglas.

A Children's Hospital (Ospedale di bimbi). Amy A. Bernardy. Rivista ospedaliera, Roma, 1914, V, No. 3.

In a letter from America the author gives a pleasing description of a children's ward in a New York Hospital. All children are under 5 years old. She is struck with the neatness of the little tots—the girls being dressed in blue, the boys in pink. All nationalities of the great cosmopolitan city are here represented—the dark-eyed Italian boy, the blond German, the Greek, the precocious Hebrew, the talkative Irish children. Many of the little ones are not really sick—they are merely nervous and overexcited from the noise, stir, and turbulent life of the great American city. They want only rest and sleep, much sleep, which they get here to their fullest needs.

The Hospitalization of the Tuberculous (Sull' ospitiliggazione dei tubercolosi). Arturo Campani. Arch. di scienza ospedaliera, Milano, 1914, IV, No. 2.

In Italy 50,000 persons die annually from pulmonary tuberculosis, and the number of tuberculous patients is continually increasing. So far little has been done for the prevention of tuberculosis, because there is a widespread notion among the people that all human efforts are vain in combating this terrible scourge. The author points to Germany, England, and the United States, where great results have been accomplished by the establishment of special tuberculosis hospitals. In Germany there exist 122 sanatoriums for the common people, besides many pay institutions for the well-to-do. As a result of the energetic antituberculosis work, the mortality of tuberculosis in Germany from 1875 to the present time has been reduced by half. Not only was a large percentage of tuberculous patients entirely cured, but the very great danger of infecting other people has been removed. The author advises his countrymen to abandon the present practice of maintaining tuberculosis wards in general hospitals, where the mortality is great, and where frequently other patients of the hospital are infected, and to establish sanatoriums and special tuberculosis hospitals. Such institutions alone are favorable to a cure and are a guarantee against the spread of the disease.

The Hopital de Enfants-Malades (1802-1913). Dr. P. Lereboullet. Paris médical, 1913-14, IV, No. 1 supplement.

The Hopital des Enfants-Malades in Paris was the first hospital established for the treatment of children's diseases. In 1802 the General Board of Hospitals decided that the former orphans' home on the Rue de Sèvres should be exclusively devoted to the treatment of sick children under 15 years of age. Both sexes were admitted from the beginning. Patients who were supposed to have a contagious disease were isolated from the other children. In 1820 the hospital was greatly enlarged. So successful was the hospital in the treatment of sick children that travelers from all countries who visited Paris never omitted to see this institution, which, by its neatness, cleanliness, and orderliness made a deep impression on all visitors. In 1837 Dr. Bilgrain, one of the hospital physicians, donated 150,000 francs for two new pavilions. In spite of a number of new additions made in the 50s, the hospital was overcrowded and the mortality from contagious diseases was extremely high. In the 80s a great improvement took place. The hospital was greatly enlarged, and special isolation wards were established for the various infectious diseases.

This hospital plays a great part in the history of French medicine. Some of the greatest names in French medicine are numbered among those who devoted their skill to the treatment of the little patients of this hospital, such names as Baudelocque, Tessier, Grancher, Marfan, Hutinel, Lannelongue, Broca, Kirmisson, Terrien. and many others.

State Care and Training of the Feeble-Minded in Maine. Carl J. Hedin, M. D., Superintendent Maine School for Feeble-Minded at West Pawnal. Maine Med. Jour., June, 1914.

The children in the Pawnal school are graded by mentality and placed in classes fitted to their ability to receive instruction. Only the lowest forms of idiots are unable to perform useful manual labor. The boys learn cobbling, carpentry, painting, cane seating, weaving, and basketry. The girls learn knitting, sewing, rug making, embroidery, weaving, lace making, and crocheting. There are school classes for all the higher grades, and industrial classes for all. Nearly all the boys help on the large farm, and eventually become nearly or even quite self-supporting. There are 256 inmates in the present school, located on a 1,200-acre farm, but the writer believes there are five times that number in the state uncared for. The future must manage this problem, especially the care of the feeble-minded female, who, statistics show, is twice as prolific as the normal woman. Moreover, statistics show that feeble-mindedness comes usually from the mother. As for the solution of the problem, the writer is quite sure it lies in rigid segregation and state care, since public sentiment is so strongly against sterilization of the unfit.

The Open-Air Building a New System of Hospital Construction (das Freilufthaus ein neues Bausystem fur Krankenanstalten). Dr. D. Sarason. 122 pp. 8vo, München, J. F. Lehmann, 1914. Price, $1.25.

Already in 1902, Sarason exhibited models of a new system of hospital construction at the International Tuberculosis Congress at Berlin. But the system, which he called the terrace system, was then still imperfect and not worked out in its details. Since then the author has perfected his plans, and a hospital based on his views has already been constructed in England, the King Edward Sanatorium in Midhurst. Sarason finds that a most important therapeutic means, the open-air treatment, has not been given due consideration in modern hospital construction. He expresses himself against the extreme decentralization in modern hospital construction, and thinks a compromise between the old centralized corridor structures and the pavilion system should be made. He advises the erection of three- and four-story buildings, and points to America, where five and more stories show no disadvantages in the cure of diseases. But to make a perfect open-air treatment possible, Sarason proposes the construction of open-air terrace buildings (Freiluft-Terrassenhäuser). The novelty of this construction consists in the fact that each story stands 1½ meters back of the one below, while the terrace thus formed is widened by pro-

jecting 1 meter beyond the lower story. The whole width of the terrace is therefore 2½ meters (8 feet). Every room is provided with such a terrace balcony (Terrassenbalkon), on which the patients can enjoy the fresh air at their pleasure and to which the beds can be rolled out in favorable weather.

In the second part of the book Dr. Nussbaum considers the questions of arrangements, furnishings, heating, ventilation, etc., of such a hospital, and Architect Becker gives his views on the construction and costs of such a terrace building. In another article Dr. Bardswell, director of the King Edward Sanatorium in Midhurst, reports on the favorable results which were obtained at the Midhurst Sanatorium built on Sarason's plans. The book is supplied with numerous plans and diagrams illustrating this new system of hospital construction.

Expensive Mospital Construction and the Size of Hospitals (Der hohe Kostenaufwand fur Krankenhaus-neubauten und die Grösse der Krankenanstalten). Ztschr. f. Krankenanstalten, Leipsic, 1914, X, No. 20.

The question of expensive hospital construction was lately discussed in the Prussian Parliament. It was stated that in Berlin and vicinity a hospital costs now 12,000 marks ($3,000) per bed, while in former times the expenses were only 3,000 to 4,000 marks. Th. minister of the interior admitted that too much money was spent in modern hospital construction, but stated that it was not the medical officers, but the architects and the various city governments of Prussia that demanded such expensive and luxurious structures. The author thinks that the complaint about too expensive hospital construction is justified. He is of opinion that this increasing luxury will finally work to the detriment of the hospitals and the patients. People with plenty of money may go to expensive sanatoriums and private hospitals, but the municipal hospitals must, above all, serve the inhabitants who live in moderate circumstances and cannot spend large sums for hospital treatment. The author thinks that very large hospitals, hospitals of 1,000 to 2,000 beds, are not advantageous. Such institutions require comparatively a much larger personnel than is necessary in smaller hospitals. He quotes Architect Schachner, of Munich, who insists that no hospital ought to contain more than 600 beds, and that such a hospital is sufficient for a population of 120-000 inhabitants.

Employment of Female Nurses in Divisions for Male Venereal Patients—Ordinance of the Prussian Minister of the Interior (Beschäftigung von weiblichen Krankenpflegepersonen auf Krankenhausabteilungen für männliche Geschlechtskranke—Erlass des Preussischen Ministers des Innern). Heilanstalt, Leipsic, 1914, IX, No. 8.

Learning that in a few hospitals female nurses are still employed to tend to male venereal patients, the Prussian minister of the interior, by an ordinance of February 11, 1914, requests all hospitals to discontinue this practice. He demands that not only should female nurses not be required to assist in the treatment of such patients, but that wherever possible these nurses should be entirely withdrawn from wards for male venereal patients.

Typhoid Baccillus Carriers and the Public Hospitals (I portatori di bacilli e gli espedali publici). Dr. A. Caccini. Rivista ospedaliera, Roma, 1914, IV, No. 7.

In some European countries special laws have been passed concerning typhoid bacilli carriers. In German hospitals no convalescent from typhoid fever is discharged before a bacteriological examination of the feces and the urine has proved him to be free from typhoid bacilli. In England, if a patient is after three months' observation not found free from bacilli, he is either retained at the hospital, or, if he refuses to remain, he is discharged, but is then kept under constant surveillance of the health officer of the district in which he resides. In America this question has attracted much attention. Dr. Meakin in Montreal advises the hospitals to retain all bacilli carriers until they are completely sterilized through proper treatment. Dr. Barunau, superintendent of the New York hospitals, requires a thorough examination of the urine and feces of typhoid reconvalescents. From 1911 to the present time 12.6 percent of all typhoid reconvalescents were found to be bacilli carriers. All such patients were treated at the hospitals until they were free from bacilli.

The Question of "Increased Construction Costs of Our Modern Hospitals" (Zur Frage der "zunehmenden Verteuerung unserer modernen Krankenanstalten"). F. Ruppel. Ztschr. f. Krankenanstalten, Leipsic, 1914, X, No. 16.

The article of Dr. Khrone in the Hospital Yearbook on the increased cost of modern hospital construction has caused a great stir in Germany. At the solicitation of the mayor of Cologne, a convention of delegates from all the large cities was held at Berlin, March 27, to consider this question. Twenty-seven delegates representing the cities of Cologne, Berlin, charlottenburg, Schöneberg, Hamburg, Bremen, Dresden, Leipsic, Munich, Frankfort, and Düsseldorf were present. After mature deliberation, the convention came to the conclusion that Dr. Krohne's claim that the cities are extravagant in spending money on new hospitals are entirely unfounded. The convention selected a committee, consisting of practical builders, medical men, and administrative officers, to draw up a detailed report on modern hospital construction in Germany, and to put this question on a thoroughly scientific basis.

Industrial Insurance—Medical Examination of Employees and Prevention of Sickness Its Proper Foundation. Surgeon J. W. Schereschewsky, U. S. P. H. S. Weekly Bulletin, Public Health Service, June 5, 1914.

Prevention of disease is a prerequisite to the lowering of insurance costs, the writer thinks, and frequent medical examinations of employees is necessary in order that preventive measures may be effective. It is not sufficient that hygienic and sanitary conditions in workshops shall be assured, since the home environment is often responsible for illness and inefficiency; the necessity for visiting nurse work and social service activities follows until the problem of industrial insurance becomes inextricably connected with the broadest health measures, including the work of community health officers. The following general conclusions of the author are made: 1, industrial sickness insurance is an economic necessity in modern social evolution; 2, the basis on which industrial insurance should rest is the prevention of illness and physical disabilities; 3, frequent periodic physical examinations of workers constitute the logical means by which defects and diseases can be detected in their incipiency; 4, the scope of such examinations should be extended to include home as well as factory conditions; 5, Industrial insurance based on preventive measures should redound greatly to the benefit of society (a) by reducing the annual loss of time through illness, (b) by establishing hygienic standards, (c) by establishing minimum hygienic standards for industries, (d) by favoring the enactment of uniform industrial legislation, (e) by increasing the efficiency of local health authorities; 6, the cost of carrying industrial insurance based on preventive principles should be less than that of present systems.

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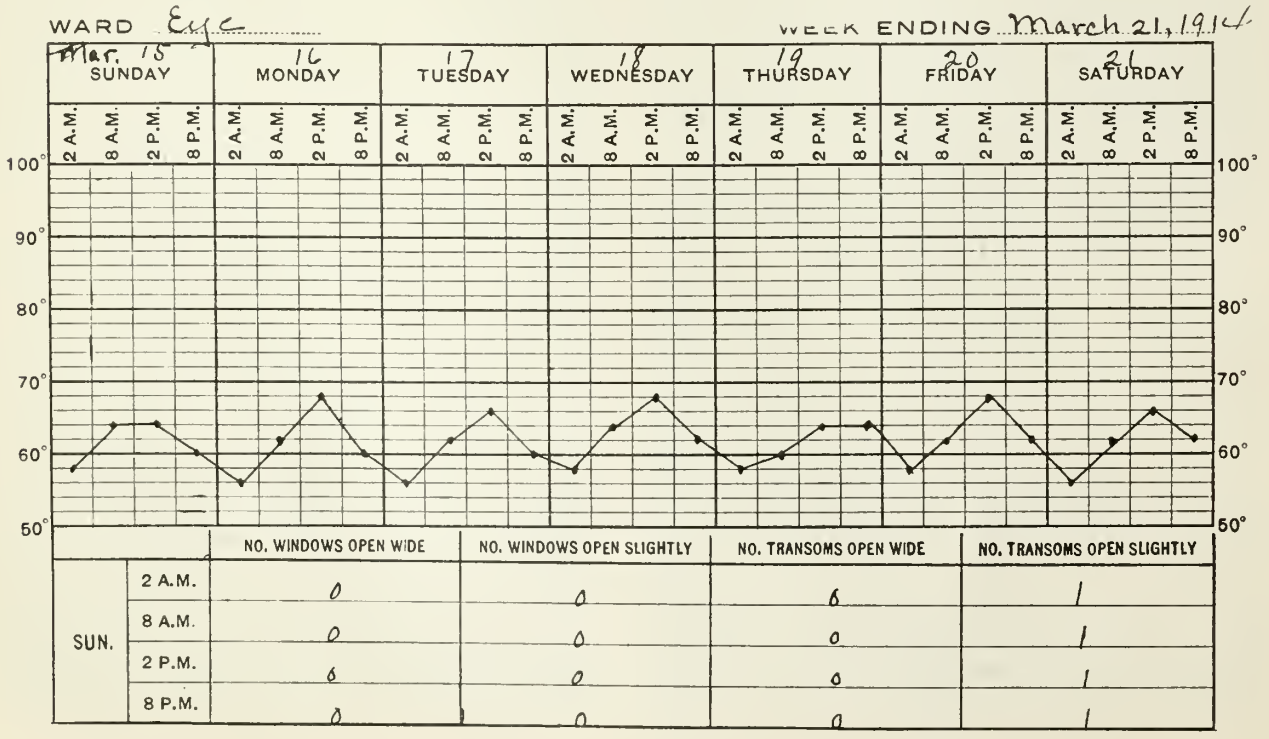
CHART YOUR ROOM TEMPERATURES.

Mt. Sinai Hospital, New York, Knows What Its Mechanical Ventilation System Is Doing For It.

Mt. Sinai Hospital, New York, is doing what every hospital should do, but which practically none are doing. There is a standardized thermometer in every room where patients live, and a temperature chart of the room is kept by a nurse for each six hours of the twenty-four, with added memoranda of the conditions under which the temperature was maintained—that is, whether there were windows or transoms open, and, if so, how many.

The accompanying illustration shows one week's record in a 4-bed surgical ward, with a sample of the several hour markings. If every hospital that has a mechanical system of ventilation at work would adopt some such system as this, it would not take very long for superintendents to find out just what the system was doing for them. The data would be even completer if a hygrometric chart could also be kept to show the relative humidity of the apartment. Temperature may mean one thing at one unit of humidity, and a vastly different thing at another unit. It means very much whether the air is wet or dry.

WARD TEMPERATURES.



HOME-MADE HOSPITAL APPLIANCES

Devices Improvised in Institutions to Lighten the Work or to Make It More Efficient.

A few weeks ago THE MODERN HOSPITAL called on hospital superintendents and heads of hospital departments to send in for publication photographs and descriptions of home-made appliances which they had found efficient to perform certain useful functions, and for which there seemed to be no substitutes on the market.

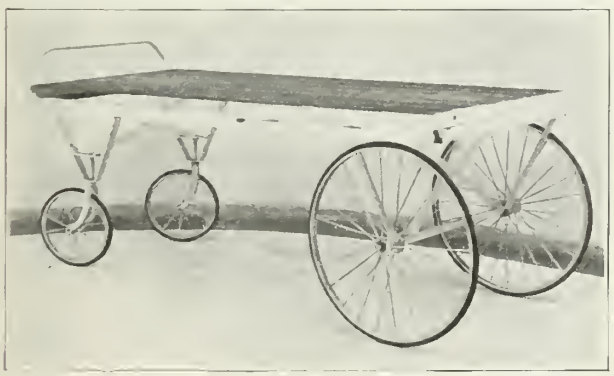
Nearly all the standard hospital equipment began in the hospitals as home-made appliances, devised by ingenious workers to meet individual problems. If a device seemed to do the work well, it was copied in another hospital, and then another, until the commercial folks saw that it was worth while. Little mechanical improvements were made and the article became "standardized."

The response for information about what the hospitals had in the way of such appliances was immediate and hearty, as indicating a spirit of cooperation at once promising and good to see. The first installment of these stories of achievement follows:

Wheel Bed—Lakeside Hospital, Cleveland.

DR. A. R. WARNER, SUPERINTENDENT.

We receive more inquiries about our wheel beds than any other article in use at Lakeside. The patients greatly enjoy these beds, and they are convenient, but they are a luxury. The appearance and general construction of the bed is shown in the accompanying cut. The 24-inch stationary rubber-tire wheels and the 12-inch swivel wheels are standard, and can be purchased on the open market. We make the frames in our shops and the springs are put



Wheel bed.

on by a local woven-wire spring manufacturer. The cost to make and assemble is about $25 each.

The advantages of this bed are, first, ease and comfort in moving patients. They are the same height as the ward beds. The wheel bed is run to the side of the ward bed, and two nurses can easily place patient, mattress, and other bed material onto the wheel bed without disturbing the patient. One nurse can then easily take the patient from one place to another, and patient and mattress is as easily transferred to another ward bed. The second advantage is the freedom it gives bed patients. Patients unable to sit up are taken by their special nurses to the sun rooms, to the porches, or into the hospital corridors, giving them diversion from the monotony of isolation in their rooms. Ward patients are often kept on the porches, out of doors, all the time on these wheel beds, and for meals, dressings, or care, one nurse or orderly can easily run them back into the ward. Each ward is provided with a certain number of these wheel beds, and they are in constant use.

Over-Bed Table—New England Baptist Hospital.

MISS EMMA A. ANDERSON, SUPERINTENDENT.

This over-bed table is in many respects superior to the ordinary bedside table. It is absolutely firm, never sags or gets off its base, and moves easily on casters. By pushing it down to the foot of the bed when not in use, it takes up no extra space. When pushed down over the foot of the bed, it makes an extra shelf for books or flowers; especially pretty for flowers, because the patient can always see them. It has ample room, not only for the patient's

Over-bed table.

tray, but extra dishes and dish covers may be placed at one side, thus avoiding crowding the tray. It makes an admirable writing desk, and may be used also as a table for solitaire or for picture puzzles. It is very serviceable for the surgeon when doing a dressing, as the table may be pushed up or down over the bed, and the dressings and utensils spread out conveniently for use. In fact, more uses can be found for this table than one could readily enumerate, and our doctors and patients are universally pleased with it.

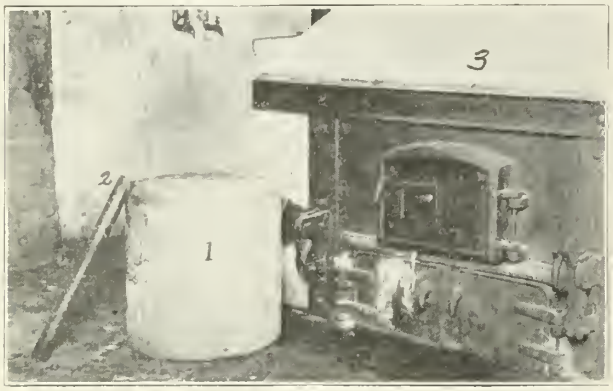
Tin Can Crusher—Presbyterian Hospital, Chicago.

MR. ASA BACON, SUPERINTENDENT.

Tin cans that accumulate in the hospital are not only an item of expense to dispose of, but take up a great deal of valuable space. I have found a way to put two barrels of tin cans into one, or to make one wagon load instead of two, thus cutting down my cartage bills one-half, besides saving valuable space. The can smasher is very easily made. Take a half-barrel, saw it in two, and fill with concrete. After it dries cut the hoops and remove the barrel. This gives a round concrete block, as shown in the illus-

tration. A square block can be made by using a box instead of a barrel.

Take a piece of 2½-inch steam pipe. Cut it 2 feet 6 inches long. This makes a good smasher. Lay a can on the



Tin can crusher—1, concrete block; 2, can smasher; 3, garbage burner.

block and hit it once or twice with the smasher, and it becomes flat instead of round. It is only a moment's work of the janitor to do this, and one may readily see the immense saving it will make in cartage and storage.

The hospital building being erected at Hastings, Neb., by H. W. Lanning in memory of his daughter, Mary T. Lanning, whose name it is to bear, promises to be a handsome structure as well as a modern one. It is T-shaped and two stories high. The exterior is executed in white Carthage limestone, cream colored vitrified brick, and white terra-cotta. Emphasizing the classic appearance of the front is a two-story portico, the pediment of which is supported by six large Corinthian columns. Some of the noteworthy features of the building are an operating room, the floor of which slopes to the center, where there is a drain, making it possible to cleanse the floor in a few moments with a hose; a locker room with a steel locker for every bed in the hospital; floors of material that deadens sound and will not stain permanently; an automatic elevator which will not move until all the doors to the shaft are closed; and a flashlight signal system.

As shown by figures quoted in *The Hospital*, London, May, 1914, since the establishment of the King's hospital fund seventeen years ago over 1,750,000 pounds sterling have been raised and distributed among hospitals, convalescent homes, and sanatoriums for consumptives. The editor claims that institutions which do not maintain average contributions from legacies must attribute the diminished supply to faulty methods or lack of up-to-date, competent administration and adequate driving force; that a great voluntary hospital or kindred institution of today cannot thrive and extend its work unless it claims the service of at least one good man or woman of marked ability and energy, devoted to advancing its interests; that a most remarkable example of this type is Sir J. Wolfe Barry in his connection with the Westminster Hospital, which has to face the responsibility of finding a new site, creating a modern, up-to-date hospital, with perfect medical school equipment, to take its place in the medical and surgical work of London.

Mercy Hospital, of Altoona, Pa., held a public reception June 4th to celebrate improvements that have been made at that institution since the first of the year. An entire new floor has been added, giving the building three stories above the basement. The new third floor contains nine private rooms, x-ray room, laboratory, with the necessary supply rooms, office, and laboratories. The entire old part of the building has been renovated and improved, and the capacity of the hospital is now increased to 40 beds. A training school of ten pupil nurses is conducted, and, in view of the fact that the hospital has been in existence only four years, there seems to have been unusual activity on the part of the management. Miss Laura M. Hamer, a graduate of the University of Pennsylvania, is the superintendent, and Miss Grace Laird, of the German Hospital, Philadelphia, the head nurse.

NEW INSTRUMENTS *and* APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

The Coolidge X-Ray Tube.

A great deal of interest is being taken in the new x-ray tube recently described and demonstrated by W. D. Coolidge, D. S., Ph. D. Dr. Coolidge is engaged in research work at the experimental laboratory of the General Electric Company at Schenectady, N. Y. His achievements in producing ductile tungsten are well known, and it is through his method that the present tungsten target

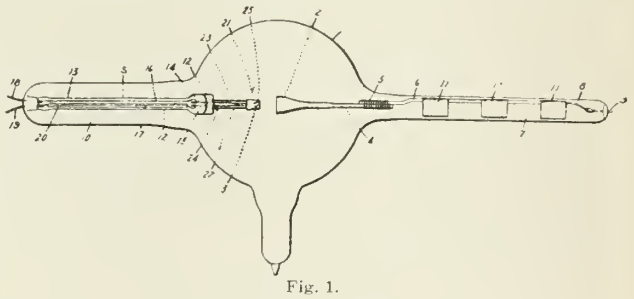


Fig. 1.

tube, which is very generally used for heavy duty service, became possible.

The new tube bearing his name differs quite materially in principle from that of any other preceding type, and has certain advantages which it seems will make roentgen technic more simple in the future. It has been claimed that, due to the presence of gases which are not liberated in the process of manufacture, uniformity in results is produced when tubes are used for roentgenograms or thera-

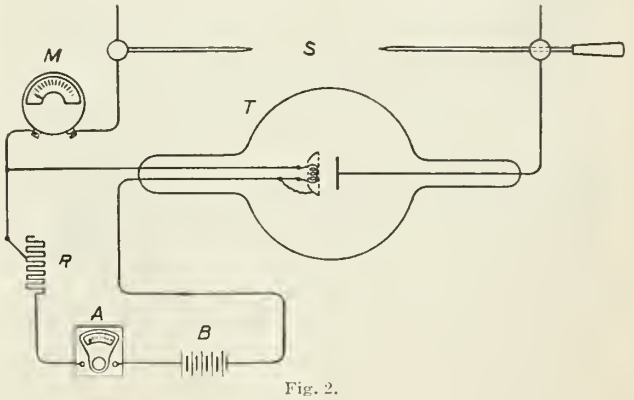


Fig. 2.

peutic purposes. The Coolidge tube permits of a state of vacuum in the original pumping which is far beyond that ever before attempted in tube manufacture; the gas pressure is only a few hundredths of a micron, whereas in the ordinary tube it is several microns.

The cathode is a tungsten filament, wound in spiral form No. 25 (Fig. 1). This filament is electrically welded to heavy molybdenum wires 14 and 15 (Fig. 1). To the

other extremities are welded two copper wires 16 and 17, these in turn being welded to platinum wires 18 and 19. The outer end of the glass supporting tube 13 is of German glass, the same as the bulb, but interposed is a series of different kinds of glass which allow for the difference of expansion.

The tungsten filament which forms the cathode is heated by a current from a small storage battery. An ammeter and an adjustable rheostat in the circuit permit of the regulation of the heating current, so that the temperature may be regulated from approximately 1,890 degrees to 2,340 degrees.

The anode or target fills a double purpose in that it also serves as the anticathode. It consists of a single piece of tungsten weighing 100 grams and the diameter is 1⁹⁄₁₀ centimeters. The tube is connected as shown in Fig. 2, T being the x-ray tube, B the storage battery, A the ammeter, R an adjustable rheostat. This rheostat can be placed at any convenient point, so that exposure of the operator to the rays is unnecessary. S is an adjustable spark gap and M is the milliamperemeter.

Unless the filament of the tube is heated, the tube shows no current flowing in either direction, even with a voltage of 100,000. The current can pass in but one direction—namely, from the hot filament—as the cathode. The current is therefore rectified by the tube, which seems to indicate that in the near future, if the Coolidge tube proves successful, roentgen apparatus can be greatly simplified, since there is a possibility that nothing more will be required in the way of apparatus than a step-up transformer, the output of which can be regulated. It will be noted that by adjusting the storage battery rheostat so as to pass a given amount of current, the filament is heated to a certain degree, and the rays which are generated are in direct proportion, as the temperature of the filament is raised or lowered.

In some of the experimental work in developing the tube, x-rays were generated for as long as fifty minutes without the least variation in penetration. Again, it is stated that the tube can be adjusted for treatment purposes, and, if necessary, immediately used for heavy radiographic purposes.

Just what the ultimate outcome of this new tube will be as regards practicability is a question. It will require careful technic on the part of the operator, especially when used for therapeutic purposes, due to the heavy output of x-rays.

So far as we can learn, comparatively few of the tubes have been made, and these are in the hands of experts, who are testing them, but it is to be hoped that they will soon be available if they have all of the advantages which are now apparent.

Modern Instruments for Applying Heat to Inhibit and Destroy Inoperable Carcinoma.

BY THE TECHNIC DEVELOPED BY DR. J. F. PERCY, GALESBURG, ILL.

During the last few years the subject of carcinoma of the uterus has been widely discussed at medical and surgical meetings, as well as by the medical press. In consequence of this extensive publicity, various methods for treatment of the disease have been developed, among them being heavy doses of the x-ray, so-caled "massive raying," and treatment with large quantities of radium. It has been pointed out, however, that in advanced and in so-called inoperable cases these treatments are not sufficient to arrest the disease, and therefore the technic of applying intense heat by actual cautery as developed by Dr. J. F. Percy has attracted considerable attention in the surgical world.

After many months of experimenting, Dr. Percy has succeeded, with the help of his instrument maker, in constructing a set of instruments which are as nearly perfect as possible, and it is claimed that with their assistance the procedure can be made reasonably safe as regards damage to the tissue in contact with the instruments, as well as preserving the urethra and the vagina intact.

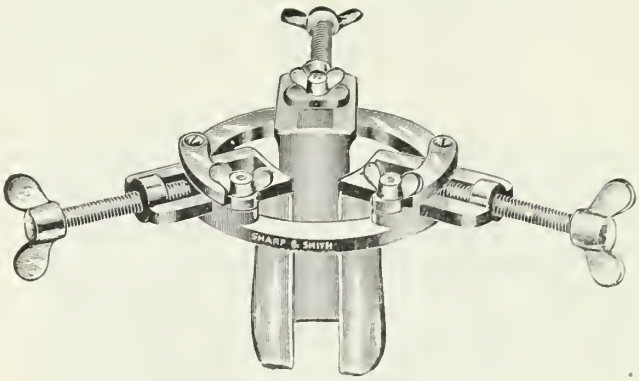


Fig 1. Vaginal dilator.

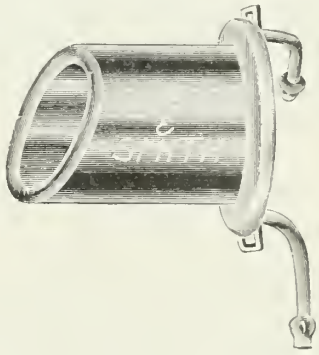
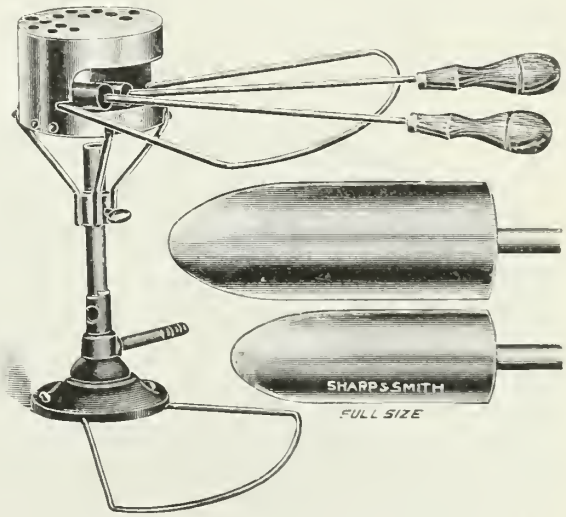


Fig. 2. Water-cooled vaginal speculum.

The armamentarium consists of a vaginal dilator (Fig. 1), used where the vagina is too small to admit the water-cooled vaginal speculum (Fig. 2), cautery iron made of copper in different sizes (Fig. 3), and a gas furnace (Fig. 4), for the purpose of heating the cautery irons. Fig. 5 is another water-cooled speculum, which has a depression on one side for the purpose of introducing



Figs. 3, 4. Gas furnace for heating cautery irons and illustrations of cautery irons.

an angular bent thermometer in the bladder in order to measure the degree of heat coming into the bladder during the treatment or onto the urethra when these organs have been attacked by the disease.

The doctor also had an electric cautery constructed which he prefers to the gas-heated cautery iron for the reason that continued heat, instead of intermittent heat,

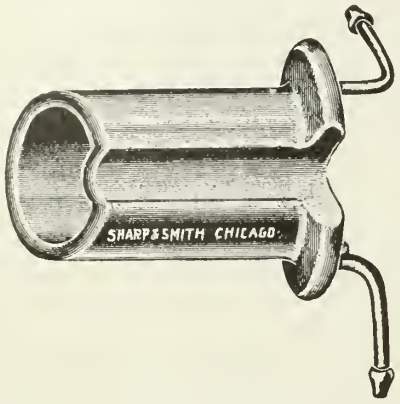


Fig. 5. Water-cooled speculum with depression to allow introduction of thermometer.

may be applied, which materially shortens the time of operation. The handle (Fig. 6) is also essential for the reason that with this instrument the vaginal speculum may be held in proper position with the assistant's hand out of the field of vision of the operator.

New Method of Holding Fractures with Ivory Plates and Screws.

BY DR. PAUL B. MAGNUSON.

The author claims that this new method stimulates the growth of bone in fractures and eliminates the necessity of any further operative procedures to remove the plates or screws, as the material is entirely absorbed by the tissues.

In oblique fractures it is practically never necessary to use a plate of any kind. These fractures may be held by two screws, one through the upper and one through the lower end of the fracture holding the fragments together. These screws are inserted in the following manner:

Holes are drilled through the upper and lower end of the fracture and at a right angle to it. Through these holes is put a tap (Fig. 1, No. 5) the same size as the screws to be used, which cuts a thread on the inside of the hole. The tap is then removed and ivory screws inserted, which fit snugly into the space. No force is required to put the screw in, as the hole is the proper size for the screw. The ends of the screws are cut off flush with the cortex of the bone on each side, leaving nothing projecting into the soft parts. The absorption of moisture by the

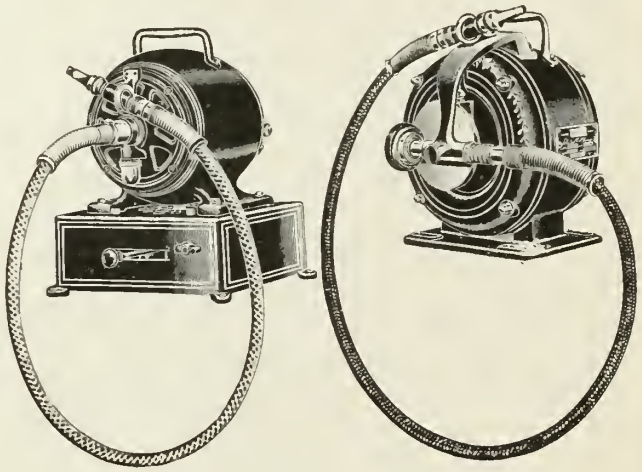


Fig. 2. Victory bone surgery engine.

ivory causes it to settle very tightly into the holes within twenty-four hours, and this allows no motion between the fragments.

The screws (Fig. 1, No. 7) are entirely absorbed in from three to four months, do not act as a foreign body, never have to be removed, and do not cause any pain while in place.

The plates (Fig. 1, No. 4) used in retaining transverse fractures are of two sizes. These are inserted in such a way that there is practically no strain on the plate, and it is therefore unnecessary to use a very large piece of material. They are braced on all sides by bone, with which they are in close contact, and the small size avoids the necessity of making a long incision and traumatizing soft tissues around the fracture.

The fracture is cut down upon and adjusted, and the periosteum incised and pushed aside in a space, at the largest, two and one-half inches long and a half inch wide. Parallel circular saws (Fig. 1, No. 1) driven by a motor (Fig. 2) are then operated parallel to the long axis bone and at right angle to the fracture. These saw blades are set with a washer between them, so that they cut parallel lines exactly the width of the plate to be used. The parallel incisions are made through one side of the bone only and into the medullary cavity, and the length of the plate to be used is never longer than one and three-quarter inches or can be made shorter if it is necessary.

After these parallel incisions are made, they are connected at each end by a hole drilled at each end of the slit (Fig. 3, B). This leaves a loose piece of cortex, which is lifted out by chisel (Fig. 1, No. 3), which leaves a slot, exactly the size of the plate to be used, down into the medullary cavity. Into this slot is driven the plate until it strikes the cortex of the opposite side. It will be found that

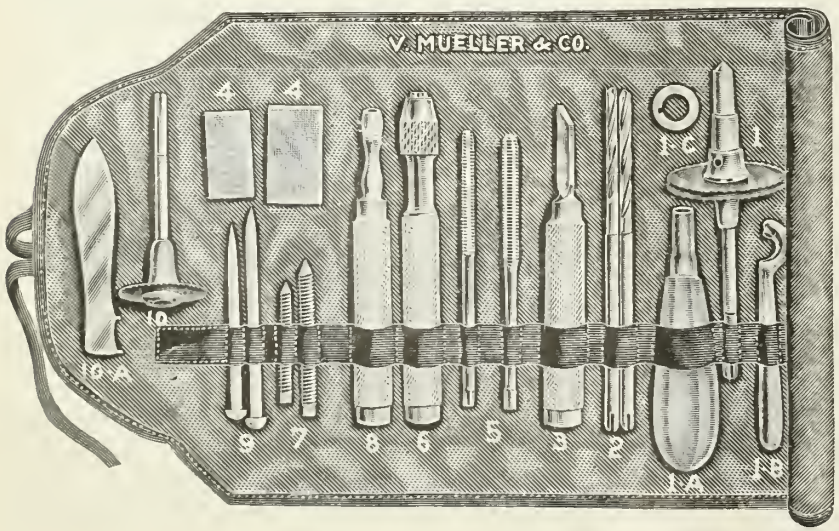


Fig. 1. Instruments, ivory screws, ivory blades, and ivory pegs.

this plate fits very snugly into the slot and allows no motion between the two fragments; it is braced on both sides and below by cortex. All that is necessary now is to drill a hole on each side of the fracture at an angle to the plate, and insert ivory pegs to hold this plate down against the cortex of the opposite side. This is done with a twist drill

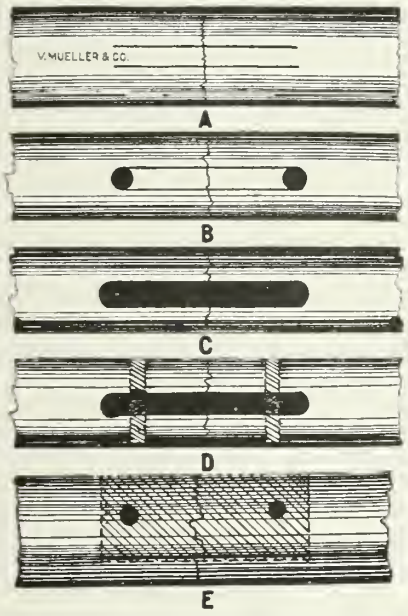


Fig. 3. Method of holding fractures with ivory plates and screws.

(Fig. 1, No. 2), which makes a hole exactly the size of the peg to be used. The peg (Fig. 1, No. 9) is driven through the bone until it is felt emerging on the cortex of the other side. It is then cut off flush with the bone and the other half of the peg used for the hole made on the opposite side of the fracture. If the plate protrudes beyond the cortex of the bone, it is cut off flush with the bone with a saw (Fig. 1, No. 10), and the fracture covered by fascia and skin, as in any other method.

The method is simple, rapid, and accurate. The instruments are made to fit the plates and screws, and it will be found that there is no difficulty in securing results with this method that cannot always be secured by putting a foreign body, such as steel, into bone.

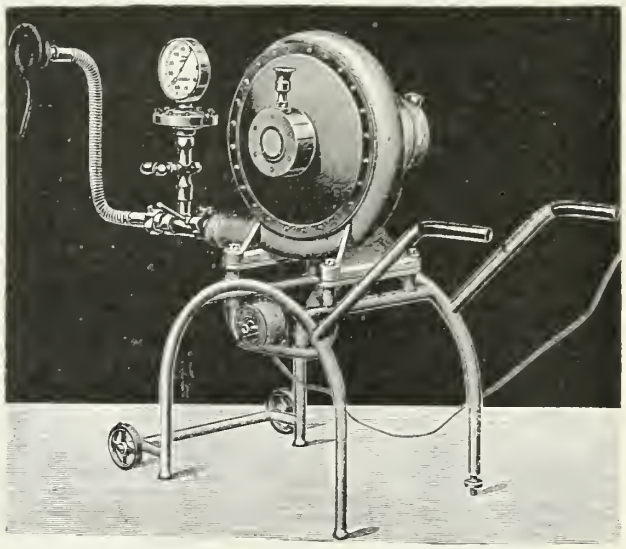
The plates are absorbed in from four to eight months, do not act as a foreign body, do not give any pain, will not allow angulation of the fragments in any way, and it is unnecessary to put in a large amount of material, as the plate is inserted in such a mechanically perfect way as to remove all strain.

Apparatus for High Pressure Narcosis and Artificial Respiration.

ACCORDING TO DR. SCHOEMAKER.

This apparatus is designed to replace large high and low pressure chambers, such as were originated some years ago by Dr. Sauerbruch. It consists principally of an electric motor, coupled direct to a blower. The motor and ventilator are built into a metal case, and are dust proof, so that they are not exposed to outside influences.

To comply with the requirements of modern asepsis, the apparatus can be easily cleaned with aseptic solutions. To the blower is attached a tube of large caliber, metal covered, with a suitable face mask. The anesthetic is in a small funnel in front of the blower, and with it the smallest quantity of air may be mixed and then forced into the mask. A manometer shows the pressure in the mask, and this pressure can always be regulated by applying the mask more or less tight against the mouth and nose. The air pressure is regulated during the operation according to the extension of the lungs. For this purpose the mask is provided with a small valve, which can be closed more or less, according to the pressure required. The apparatus is solidly constructed, the mechanical parts



Apparatus for high pressure narcosis and artificial respiration.

are as simple as possible, and the whole outfit is mounted on a stand, easily transported.

It has been found that in endothoracic operations this apparatus is also very satisfactory for artificial respiration in case respiration stops during the narcosis. It is stated that eight to ten inhalations and exhalations were sufficient to start the normal respiration in some cases, but, if necessary, artificial respiration can be continued as long as required.

Dr. Edmund J. James, president of the University of Illinois, announced recently that he will ask the next Illinois Legislature to appropriate $1,000,000 for a teaching hospital to become a part of the university.

According to the annual report of the board of hospital service managers of the Missouri Pacific-Iron Mountain Railroad, issued recently, the scheme of intrusting the control of the hospital service of the road to the employees, which was adopted sometime ago, is giving general satisfaction. Under the arrangement the managing board in control of the entire hospital service is composed of nine members—eight officials and other employees of the road and the chief surgeon, who is ex-officio chairman. Funds to carry on the work are raised by assessments of the employees in proportion to their salary. The report shows an increase in the net surplus of the year of $12,163, of which $5,000 has been set aside for the erection of an emergency hospital at Argenta, Ark.

One of the smallest hospitals in Philadelphia, the Woman's Southern Homeopathic, managed by a few women, has been making remarkable strides in development recently. After doing a unique work for women and children for some years in a large old house, the managers bought a fine corner property at Broad and Fitzwater streets, where they erected a handsome and substantial building, fire-proof and modern in every detail. In less than a year a first-class house adjoining the property was secured, needing only paper and paint to make it a most attractive nurses' home. The next step is the building of a small, up-to-date laundry in the rear of the property, which will be finished in another month, and then the little plant, caring for 58 patients, will be complete.

DEPARTMENT *of* NURSING

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Invalid Occupation in the Curriculum of the Training School.

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The introduction of occupation study into the curriculum of the training school should, in all cases, be preceded by a distinct consciousness of its need. This consciousness may exist only in the mind of one member of the staff; possibly the feeling may be shared by another. If the need be realized both by the superintendent of the hospital and by the head of the training school, the chances of success will be very good. More frequently the active interest is manifested by one officer, the attitude of the second being, at best, only a passive one.

It is safe to predict that this need will not be felt by the pupil nurses; to these, profitable experience consists largely of the witnessing of spectacular modes of treatment. Not realizing that these methods are rarely employed outside of the hospital, pupils deceive themselves with the idea that they are thereby fitted for private service. Probably those most cognizant of the need are the older graduates, who, having served in many homes where the entire responsibility of the twenty-four hours was placed on them, have sought for some profitable occupation both for their own as well as for the patient's sake. Perhaps they even go so far as to say, "I wish that my training had included something of the sort."

Ask the public what the trained nurse of today lacks most conspicuously. Is it more technic, or a fuller understanding of human, as opposed to merely physical, being? But, granting the fact that the patient's need is real, why saddle the already overworked nurse with the responsibility of this teaching? Why not bring in a craft worker to attend to this? The craft shop stands in relation to the sick as does the chemist's laboratory. There is demand for many products of both chemist and craftsman, but neither can be safely trusted to administer these to the sick. Only by those who understand invalid conditions should invalid occupations be taught.

How, then, may the pupil nurse gain practical knowledge of this subject? Except in rare instances, the need of this training will require some formal presentation and official recognition. A considerable number of hospitals have arranged for a single lecture on this subject. This will amount to little more than a pleasing and rather novel entertainment. Here and there, however, the seed may fall on a mind and heart determined on self-education. For such there is much hope. The duty of the nurse everywhere is to learn to observe and to record. Let her begin this in the realm of invalid activities, noting the peculiarities of each case and taking special care to study all spontaneous effort. From her constantly shifting world of patients she will gather much. Supplement this by the hints given by domestics, tradespeople, etc. All this represents unclassified material, but, when united with all that she finds within herself, beginning long before she dreamed of nursing, it may be set in order to good and definite purposes. Every private case yields much excellent material for this set of notes.

In all this it should ever be remembered that it is a subject studied for the benefit of the patient. Many nurses will not care individually for the work, but is not this true of many things required of all nurses? It is a part of the great whole, and therefore to be mastered for the sake of the sick.

There is a wide difference to be observed in presenting occupation study to patients and to nurses. In working with patients, one must consider the case individually and find just the work indicated. For example, this listless, phlegmatic patient may need the stimulation of a piece of red and white wool work in her hand; the nervous, twitchy girl across the corridor needs, it may be, to paint a pale yellow butterfly. The nurse should be able to judge the kind of work, the color, the amount, the time best suited to its execution. She must therefore be taught broad principles. For this reason her training must be dignified by a reasonable amount of theoretical instruction. If this is omitted and a class of nurses set down to learn various forms of light occupations, the instruction soon shrivels to a class in fancy work. The nurse will fail to identify it with her professional work. Text-books will be of some help just here, but they are few at present. The nurse needs to compile her own.

Lectures, with a limited amount of demonstration, may be given to very large classes. Here, also, problems may be set for the intervals, but the professor who branded the pure lecture method as a "broad highway to ignorance" was near the truth.

The question is often asked, "How long is this course?" And the reply is "Endless." This, however, is true—if nurses are taught six different forms of occupation suited to six different invalids, their training is advanced by so much. Ten lessons is a good course, twenty far better, continuous instruction best of all.

All courses for nurses should be preceded by two or three lecture periods. Illustrative material and some demonstration will accompany these. By the third lesson the class will be ready for some practical work. Ten members constitute a good class. In case a class numbers twice this, it is well to make two sections. It is far from easy to match work in the hands of many students and get any appreciable result in one period. The lessons should be given in the day time, and the one and one-half hour period seems best. One hour is too short for good work. During the past season lessons were given to a class of twenty seniors. The instructor came from a distance, and railroad fares were a considerable item. The classes were arranged thus: two sections were formed—the first met from 1:30 to 3 p. m., the second from 3 to 4:30 p. m. The same lesson was presented to both sections. The instructor stayed over night, meeting the same nurses in the same way on the second day, but giving the second lesson in the series. In the evening of the first day an informal lesson was given in the parlor, in which many of the officers joined. On the following morning the instructor kept open house to any interested visitors. There was also a running exhibit of the work of the class, which went on throughout the course. This was held in the reception hall and attracted much notice. The plan of this course was as follows:

Lesson I, The Baby; Lesson II, The Sick Child's Bound-

aries; Lesson III, The Land of Counterpane; Lesson IV, The Land of Counterpane (continued); Lesson V, Improvised Dolls; Lesson VI, Rake Knitting; Lesson VII, Basketry; Lesson VIII, Basketry (continued); Lesson IX, Bookbinding; Lesson X, Bookbinding (continued).

If possible to arrange for but few lessons, these should be devoted to children's work. No adult is better employed than when doing something to please a little child. The expense of material is small, since much of the instruction is directed to the use of waste matter. Nearly all of the children's lessons are provided for in this way. The adult work requires moderate purchase of supplies. The cost of instruction varies somewhat, and should always be subject to adjustment according to the conditions in individual schools.

It is early to report on what these courses have done for nurses, but some examples are noteworthy. Through interest aroused by a school giving only a few lectures, one nurse, when filling an executive position, instituted regular instruction for patients all the year around. She also arranged for considerable instruction to nurses. One of these nurses, herself an official, reports nineteen books bound, among which were her volumes of the *American Journal of Nursing*. After special attention to this work in her own school, another nurse has been elected to teach this subject in a university hospital. Here she has formed classes under the elective system. She teaches two two-hour periods weekly to nurses and superintends the work among the patients as well. A senior nurse from a large children's hospital was sent for a course of three months devoted to occupation study. She did excellent work, returned to her own school, was graduated and called back to teach occupations. A private nurse was called to care for an invalid who had had many nurses, but none who could teach occupations. She has secured by this means a case which has already lasted several years and has brought fine opportunity for travel.

An officer in a contagious hospital arranged for a course for the head nurses. In reporting on the work she said, "It did what was intended—the nurses talked more of basketry and less of desquamation."

One senior nurse in a large hospital recently applied for lessons at her own expense in order that she might institute suitable occupations in the wards for the treatment of diseases of the skin.

These are only a few of the many ways in which nurses are demonstrating the value of invalid occupations.

Hospital Trustees and the Training School.[1]

BY ADELAIDE NUTTING,

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When President Wilson said the other day, in one of his most delightful speeches, that in writing a paper he not only uses all the brains he has, but borrows all he can collect, he must, I imagine, have given a moment's satisfaction to a large number of people. I, for one, find it a genuine comfort to follow at a great distance his illustrious example, and say at the beginning of this brief paper that I have used all the brains I have and borrowed all I could lay hold of in the endeavor to say something worth your hearing on the subject of "Hospital Trustees and the Training School." On this particular subject, however, it has not been possible to borrow much, because, beyond Dr. Howland's interesting paper on "The Obligations of Hospitals and the Public to Training Schools for Nurses," little has been written dealing with the training school as a *special problem* in hospital administration requiring in a very special sense the thought and care of the hospital trustees.

The best available material is that dealing with university trustees, and it has been interesting and helpful to find out what is thought by men who have been closely studying the government of educational institutions. The late president of Harvard University, in his work on "University Administration," Mr. Pritchett, in the reports of the Carnegie Foundation, several eminent authorities in Professor Cattell's recent book on "University Control" all deal in various ways with the province, responsibilities, and powers of trustees. There is not much difference of opinion as to the kind of men who should fill this office, and the composite picture of a good trustee is of an educated man of affairs, representing the soundest element in the community, of good judgment, of deep interest in public welfare, and of such unquestioned integrity that he will not profit by his trust.

There also emerge a few pictures of other types of trustees who obviously should not hold this high office. These arrive through political favor or personal ambition, and use their trust to pay political debts or forward personal interests, or they are men of means whose gifts must be their sole contribution, or purely business men who would apply rigid business methods to every aspect of life and work. Most boards appear to be made up of a combination of these types, and educational institutions do not seem to be much more free from these weaker elements than do the charitable institutions with which we shall particularly deal.

Of any such institution the trustees are the heads and the true source of power. They establish the policy, hold and manage the funds, appoint the officers, and enact the rules and statutes; the *final word* and *authority* rests with them. They must *start* the machinery, study it, and safeguard it in its workings, constantly examine its results, and answer to the community for its failures. And there does not appear to be any straight way of evading or shifting this responsibility, once it is assumed. It may be divided, usually it must be, but it is not thereby dissipated; each member is as responsible as the other for the whole. It may be delegated, it must be, in the control of great institutions, but the law will hold that the act of the agent is the act of the principal.

This view of the powers and responsibilities of trustees should be clearly understood by all heads of training schools, and those who anywhere are struggling with peculiar difficulties in handling the complex problems of training school work should not be under any misapprehension as to where the ultimate responsibility for the training school lies. The superintendent of nurses is an agent of the trustees, the policy of the training school is the policy of the trustees, and squarely on their shoulders rests the final responsibility for its success or failure. This fact does not in any sense lessen the direct responsibility of the superintendent of nurses for the adequate fulfillment of the duties she has undertaken for doing the very best she can with the materials at her command, but it does make it necessary that the trustees should have a correct understanding of what is actually happening in the school. It should be due to no lack of moral courage on her part, to no weak and silent acceptance of wrong conditions, when the trustees remain ignorant of matters concerning the training school about which they should be informed. The difficulty in the situation appears to be that in most schools there is no regular direct means of communication between the trustees and the school. Such a committee of the board as is commonly provided in most educational and charitable institutions for all large and

[1]This paper was prepared for the St. Louis Convention, and read in the meeting on Nursing Education.

important divisions of work is omitted so far as the training school is concerned in the organization of most hospital boards. Yet it is probably safe to assume that few boards of trustees act today on anything, except business of a routine nature, which does not come to it through one of its committees, standing or special.

Now, I have watched for years able and devoted men who, as trustees, have given generously their best in time and thought to the problems of our great hospitals, but I have long felt that this large and important division of hospital work, the training school for nurses, has been singularly overlooked by them. Toward it, on the whole, they have not as yet fully met their responsibilities. I would go even further, and say that in many instances they hardly seem to be conscious of having any special responsibilities. The absence of training school committees, or any other bodies charged with special responsibility for the school, the absence of any definite financial appropriation for the needs of a school, the absence of proper provision for the most common, well-recognized school equipment—such, for instance, as suitable class and lecture rooms, adequate libraries, and teaching material—properly equipped teachers, the entire subordination of the work and life of the students to the needs of the hospital, the indifference to desirable educational standards and ideals in nursing, which it should be the school's first function to develop and cherish—these conditions do, I think, when carefully surveyed, lead one to this conclusion. If the same trustees were acting on boards of schools not connected with hospitals, they would take it for granted that such fundamental needs for school work must be provided, and would find ways and means of securing them. Instances are, in fact, known of trustees holding office simultaneously on boards of universities and of hospitals. As university trustees they forward wholeheartedly every educational measure and advance; as hospital trustees they ignore almost completely the fact that there is in the training school under their jurisdiction a definite educational problem involving definite obligations and responsibilities of no uncertain nature.

The hospital has taken over the education of nurses as its function and its right. In its educational capacity it controls virtually the whole system through which over 30,000 women are today being prepared for a profession of growing importance to society. To fail to understand this is not really intelligent, and certainly few men would expect to succeed in the conduct of their business if they did not look further into the future than do the trustees who permit the training school to be looked on merely as a "maid of all work" to the hospital. Such a policy is not merely shortsighted and unstatesmanlike—it is suicidal—for in the long run it is practically certain to destroy the spirit and the ideals of the women working in it, and to keep from it or drive from it the kind of women who are most needed. The strength of our hospitals does not depend on imposing buildings or elaborate equipment—it depends on the *spirit* and the *ideals* of the men and the women who do its work as well as on their ability and skill. To fail to appreciate the importance of the training school, to fail to foster its educational work and progress, is unworthy of the men who in other relations of life show conspicuous acumen and generous public spirit. Trustees cannot afford to have graduates who go out of our best training schools advise their sisters and friends against nursing as a profession because they are dissatisfied with the conditions under which they have been trained. They cannot afford to have said, as was said to me by a man well known and influential in philanthropic work in New York, "I would not allow my daughter just leaving college to enter any training school, because I have such contempt for their educational methods."

Now, there are ideas afloat, and rather prevalent they are too, that clear thinking on this particular subject is difficult, because the training school on its present basis is of such considerable financial value to the hospital. It always saves expense; it often, *in addition*, is made to produce revenue. To free it, to place it where it belongs, would mean expense. It would mean at the very outset the provision of paid service for a certain, in some hospitals a considerable, proportion of the miscellaneous routine work now done by pupil nurses and miscalled education in nursing. There can be no question that the proper conduct of a training school means expense, precisely as does the conduct of other good schools. The students should, of course, help to meet this, but not necessarily always by substituting labor for tuition and fees. But, frankly, I find it difficult to accept the idea that the whole question is one of money. There are other things bound up with it—tradition, custom, habit. I am inclined to believe that our trustees have become *accustomed* to looking on the school purely as the nursing department of the hospital, and its usefulness and convenience in that capacity inhibits, as it were, any larger vision of its usefulness. Its needs, above and beyond those with which the hospital is immediately concerned, stand far in the background and are obscured by the urgent needs of the hospital for much service.

Viewed as the nursing department only, the school, along with the other hospital departments, falls quite naturally and wholly under the jurisdiction of the superintendent of the hospital. He is the authorized, and frequently the only, channel of communication between these departments of the hospital and the trustees. What he thinks, they are apt to think; what he advises, they usually try to do; his policy becomes theirs. This was made very clear to me several years ago by one of the trustees of an important hospital. "We turn," he said, "to the superintendent for advice. We expect him to tell us what to do, and then we try as far as possible to do it."

It is not my intention to venture even a little way into this complicated matter of hospital administration, save to say that anyone familiar with administrative work must lean sympathetically toward a system which provides a clear-cut organization of departments and centralizes authority over them. But from this point of view, the more perfectly the school serves the hospital, the more valuable it is as a measure of administrative economy; the more essential as a part of a smooth-running and efficient machine which is the delight of the efficient executive. This attitude toward the school has come to seem to me natural and almost inevitable, for I have noticed that nurses who become hospital superintendents are, with a few exceptions, as apt as men in that position to become more interested in the management of the hospital than in the education of their pupils. Special concern or solicitude on behalf of the training school is lost in the effort to manage hospital affairs efficiently and economically.

Now, if the superintendent of the hospital does not see the training school in its true dimensions, he can hardly be expected to deal adequately with its problems; still less is he likely to be able to present them for solution to the trustees. And if the superintendent of nurses herself has no regular, open, authorized means of presenting these problems to the trustees, in what an irrational, untenable situation is she placed. Quite recently the superintendent of a training school said that she believed nearly all of her trouble would cease if she could have direct, open access to her board of trustees, as direct as that enjoyed by

the superintendent of the hospital, and without the necessity of having the needs of her school translated either through the superintendent or the medical staff, and lost occasionally in the translation.

Without being quite so confidently optimistic, I am yet convinced that a direct relationship between the trustees and the training school through its own head is necessary for a sound governmental policy. The best practicable way of providing this seems to be through a standing committee with rather special functions and powers. It is true that some schools which are provided with such committees (and there are a few) do not appear to derive marked benefit from them, but that would be offset by the number which do derive benefit, and would not affect the principle, which is correct. It is equally true that some well-known schools seem to be getting on pretty well without such a committee, but that may be due to the liberality and intelligence of the existing administration, which at any moment may be replaced by one of an entirely different caliber, in which case the school becomes helpless to maintain proper standards.

It is clearly the responsibility of the trustees to have a policy for the training school, to define it and to maintain it, materially and financially, as well as in a moral and ethical sense. And I know of no better way than the formation of a good, strong committee of the trustees as the first step. Through such a committee many of the problems with which discouraged and disheartened heads of training schools are now struggling might be studied and in some measure solved. At least they would have the satisfaction of knowing that these problems were known. The problem of lack of suitable applicants, for instance, is clearly a question for the trustees, but they should not be permitted to attack it without such a serious and careful study of the whole situation as will enable them to understand what they are about, for lack of applicants is a symptom, and the causes may not be easy to discover, they may lie partly in and partly outside the hospital, and the serious study of this one crucial problem may help in solving others, and pave the way to much needed reforms.

The trustees, acting through an alert and interested committee, could study the needs of the school on its merits, as an educational institution with important work to do, quite apart from the requirements of the hospital for service. I question very much if either hospital superintendent or training school superintendent could make such a study; certainly not while engaged in "active service"—they could not see through the smoke. Such a committee could, after appropriate study, plainly lay down a budget for training school expenditures, and either secure from the trustees adequate financial appropriations for obviously necessary work, or seek them outside the hospital in suitable endowments from friends of nursing and believers in education. Every training school should have at its disposal such funds as it needs for its work, and the spectacle of its superintendent pleading for a few necessary books or for a teacher for her students should become so rare as to fade even from our memories.

Such a committee could find ways perhaps of upholding the superintendent of nurses in her efforts to maintain suitable standards of education for admission. I am no advocate of high educational standards for admission to training schools. College education is absurdly out of the whole question, though our schools should be so conducted that women with college training will more and more desire to enter them. Not even a definite high school requirement should be made as yet, because in our present state of education throughout the country that is plainly impossible. Nevertheless, the bulk of our students should have had full high school work or an acceptable equivalent for it, and we should be steadily working in that direction. We should not any of us be willing to admit to our serious profession women whose school life has ceased at 13 or 14 years of age.

Finally, the trustees through such a committee should watch the tendencies of the day; they should know what the graduates of the school are doing, and what new fields of nursing are developing, under the influences of medical thought and sanitary science, which call on the school for changes in its methods or enlargement in its work. There are new and imperative demands made on the nurse of today, and her work in the hospital is usually her only preparation for them. No sensible person would wish to change suddenly or radically a system which has been the growth of years. It was probably the best that could be arranged under the conditions and at the time, but it may not be the best that can be arranged at a later day and under markedly changed conditions.

I see before me the vision of a school working out its educational ideals with complete freedom, adjusting its measures in response to the carefully ascertained needs of the community, and offering a quality of education and training which commands its entire respect. I see the training school possessing complete autonomy as a school, and yet carrying on a very large portion of its work in the hospital. Its body of students are working devotedly in the hospital, eager to secure the rich opportunity for knowledge and training there given. The whole system is carried out with the most frank and cordial relationships and in the finest spirit of cooperation, each benefiting by what the other has to give, each dealing justly and honorably with the other. And it seems to me possible that a better understanding by our trustees of training school problems and ideals may bring this vision nearer.

Nursing In Infancy and Childhood.

BY HENRY F. KEEVER, M. D.,
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PNEUMONIA.

Lobar pneumonia is a primary disease, characterized by sudden onset and regular temperature, which rises abruptly. This is accompanied by a corresponding rapidity of the pulse and respiration. It is due to an infectious organism, and attacks generally one lobe or part of a lobe. It is ushered in by vomiting, dyspnea and rapid rise in temperature. The child usually looks sick, the respirations are shallow and rapid, and the prostration is marked. In typical cases the disease runs its course in from five to eight days and the temperature falls by crises.

Bronchopneumonia, on the other hand, is usually secondary to a preceding bronchitis, occurring either alone or in the course of some other disease. It is characterized by a slow onset, long course, has an irregular temperature, and the respirations and pulse increase slowly with the temperature. Weak and debilitated children show a marked predisposition to bronchopneumonia. The walls of the smaller and terminal bronchi are affected, becoming thickened and infiltrated with cells. The lesions are irregular in their distribution and usually occur in both lungs.

The treatment of pneumonia, broncho and lobar, as in bronchitis, is essentially hygiene. Fresh air is of the utmost value, and here we find that cool air, 51° to 60° F., or even lower than 50°, is of distinct advantage. The cold air acts as a stimulant to the respiratory system, and patients do better than if they are in warm rooms. They should be thoroughly protected with blankets and heaters.

and a screen placed near the open window to protect from direct drafts. Bathing should always be done in a warm room.

The temperature in pneumonia may rise to 104° or 105° F. Children bear high temperatures very well indeed. Their heat centers are not well regulated, and consequently high temperatures are not so significant as in adults. What guide shall we follow in dealing with high temperature? If the child is restless and irritable, or delirious, with the high fever, then it is our duty to reduce it. This reduction will increase the patient's comfort and decrease the work of the heart. The best methods of reducing temperature are the sponge bath and cold pack.

Sponge Bath.—Alcohol, 1 part; water, 3 parts. The child is stripped and placed under a blanket. Begin with water at 95° F., so as not to frighten or antagonize the child; reduce gradually to 80° F. Sponging may be continued for fifteen minutes, and should not be repeated oftener than every two hours. After sponging, the patient is rubbed dry with a coarse towel. It must be remembered that too frequent sponging exhausts the patient.

Cold Pack.—In giving a cold pack, a warm, moist bath towel, temperature 95°, is wrapped about the child from its neck to midthighs. A hot-water bottle is placed at the feet and a warm dry blanket should cover the child completely. The bath towel is moistened at intervals of two to three minutes, the temperature of the water being gradually reduced to 75° F. In this process of moistening the towel it is not necessary to remove it; the child is turned from side to side gently, thus giving access to all parts of the pack, and the water is sprinkled on by hand. The temperature should be taken every half hour, and when reduced to 102° or 102½° F. the child may be wrapped in a warm, dry blanket. Children can be kept in a wet pack continuously without exhaustion. Fresh towels should be applied not oftener than every three hours. Children bear tub baths for reduction of temperature poorly, principally because of the undue exhaustion attendant on them. The diet should be the same as in bronchitis, which was discussed in the preceding paper.

For pain, cold applications are usually helpful. At first, until the surface is numbed, they may be disagreeable, but after the surface is chilled they afford great comfort. If heat is applied instead of cold, either a hot-water bottle or a mustard paste may be used. In making a mustard paste it should be made of 1 part of mustard and 3 parts of flour, with enough hot water to make a thick gruel. This should be spread between two layers of old linen and applied for not more than fifteen minutes at a time. Care must always be taken that it be not too hot and that the patient's skin is thoroughly anointed with vaselin before and after, in order to avoid blisters.

The Crisis.—Close watchfulness is needful during all stages of pneumonia, but especially when the crisis is expected. Then the temperature in infants and young children may fall with such rapidity to several degrees below normal that collapse takes place. The skin becomes cold and moist, the pulse feeble and intermittent, and the child may become unconscious. This is a most critical period. The child should be taken at once to a warm room, heat applied externally by means of heaters or a hot pack, and a quick stimulant administered, preferably aromatic spirits of ammonia.

After the crisis the patient should be kept in a warm, well-ventilated room, and the nourishment forced to its digestive capacity. It is surprising to note the tremendous recuperative powers of children after an acute disease like pneumonia.

When the patient has been placed under the best hygienic and dietetic conditions, we then can use drugs to advantage. This phase I shall not discuss, but simply mention that the tendency is rather to overdo. Some one has said that if a well child were given syrup expectorants, stimulants, baths, local applications, something every hour or two in the twenty-four, it would have to be a strong child indeed to withstand the treatment. Make the intervals at which the child is to be disturbed at night as long as possible by giving food, drugs, and local treatment at one time. Three-hour intervals should be the shortest. When you have done your utmost to conserve the child's strength, to give nature a chance, and have tried to make your patient comfortable, you have gone a long way in the successful treatment of any disease.

Nursing in the Philippines.

BY R. C. THOMAS, M. D.,

Appointed Medical Missionary to the Philippines, May, 1904, by American Baptist Foreign Mission Society.

The nurses who have come to the Philippines have usually come under the auspices of the army, the civil service arm of the United States, or some foreign mission board. Of the first two branches of service a medical missionary knows comparatively little at first hand, but of the latter branch he knows more. Something of nursing in a mission hospital in the Philippines may be of interest to Occidental nurses, now that the "Land of Tomorrow" has become a favorite table topic at home.

In the town of Iloilo, a small city of some 40,000, more or less, medical mission work was begun by Dr. J. A. Hall, of the Presbyterian board, in 1901. Work was carried on at first in a bamboo building, known in the Orient as a "shack." In 1906 this was supplanted by a neat 30-bed hospital of wood. By 1909 the Baptist board had united with the Presbyterian in carrying on the institution, which became the "Union Mission Hospital." At that time two American doctors were on the staff and two American nurses were provided for, and there was a corps of between twenty and thirty native assistants. In 1906 the first "Nurses' Training School" in the Philippine Islands was organized in this hospital. Today this school has grown to a nursing force of twenty, and the other helpers include ten male assistants, a housekeeper or market woman, an office and a dispensary clerk, four laundresses, and a yard boy, making a total of thirty-eight. With the two American doctors and two American nurses, the array becomes fairly formidable for a little hospital of 60 beds on the "rim of the earth," or "off the map," as some would put it. This historical excerpt is given to rouse American nurses to the fact that medical work in these far-away isles is growing to keep pace with the "hustling" methods of the American Government in handling the East. The training school has already celebrated three graduation exercises, and launched nine little Filipino nurses upon the world after a course of three or more years of training. A member of the first graduating class is still in the hospital, and she has become a most useful member of the force as head operating nurse. She has absorbed something of the dash and energy of our American nurses, all of whom have had excellent training in American hospitals, and have given themselves heartily to the work of training their little brown sister in their profession. It is astonishing to see how the personality of these American nurses has stamped itself on these Filipino girls, who become more energetic in their work and even brighten up their countenances by associating so closely with American women.

The work of the American nurses in a mission hospi-

tal, such as the one in Iloilo, is similar to that of a head nurse at home in a training school, with all the cares of the housekeeper besides. When one of the two American nurses is on furlough, the remaining incumbent has to work even harder to care for night as well as day nursing. Add to this the trying character of the climate, and one has a picture that is fairly true to life.

Fig. 1. First nurses graduated in the Philippines, Mission Hospital, Iloilo.

The most important duty of the American nurse is to see that her orders are carried out. That sounds like an easy task to one in America, where people are willing to assume responsibility, but out here it is the most difficult of all duties. The American nurse has literally to "camp on the trail" of her "little brown sister" and to instill into her Oriental mind that exactness and completeness are words in good and regular standing in the American dictionary, even though they may have dropped from the book in the East. It is this continual "following up" that makes nursing in the Orient trying. As the nurses often say, "It would be so much easier to do it myself," but in that case, though the task would be completed and completed well—for few nurses are more thorough than those trained in an American institution—the difficulty would be that the Filipino girl would never improve in her methods. It means a constant and persistent "following up," and a repetition of the same lesson on the morrow and many days after the morrow, but in the end the teacher is not infrequently rewarded by discovering that certain of the fundamentals have become a habit on the part of her pupils, and she may then begin to "follow them up" on some other point.

Even when such a lesson is learned, it is a difficult task to make a Filipino girl assume responsibility. The race lacks initiative and executive ability as a rule, and it is only by dint of the most persistent effort that this essential is developed. Occasionally it is the reverse, and a pupil nurse in the early stages will assume too much responsibility, as when one little sister took the temperature, on her own initiative, of a patient who was not very ill at half-hour intervals all night long. But this is not the rule. Generally the nurse is timid and afraid to go ahead without orders, and if some mishap occurs, due to their lack of "rising to the occasion" in an emergency, she is not prone to regard the mistake as blameworthy.

Again, a feature of Oriental nursing that is less conspicuous at home is the fight to secure neatness, orderliness, and cleanliness. In a land where it has long been a tradition that bathing is hurtful for the sick, and where the commonest query on the part of patients, some of them of the upper class, is, "When may I take a bath?" one is not surprised that the art of immaculate asepsis is "lost." In fact, the very word for "soap" was not to be found in the native tongue, their closest approach to this indispensable article having been a bit of stone. But by patience and painstaking care and repeated object lessons the Filipino will eventually acquire a grasp of what real asepsis means, a lesson which is especially important in the Orient, where microorganisms are plentiful.

Another "snag" that the nurse in a mission hospital encounters is the dialect. This Visayan language has been likened to the gurgling that would result from "gargling nails." It is hardly a euphonious tongue, as it is quite the reverse of the liquid Spanish used by the upper class. Instead it is plentifully supplied with gutterals. The "mga," the sign of the plural, and the "nga," that figures so frequently with adjectives as a pronoun and in other situations, are not easy to pronounce or harmonious to the ear.

Instead of our hearty "Good morning," we have to content ourselves with "Ma-ayong aga," and for "Good evening" we must say "Ma-ayong gabi." How can one talk amiably in such a tongue when the words meaning "please" are practically never used by the people themselves, and are as likely as not to provoke a smile when used by foreigners? Moreover, until recently the absence

Fig. 2. Boys' dormitory, Capiz.

of text-books and dictionaries has made the task doubly hard. But all these difficulties are negligible, and doubtless far less conspicuous than they are in a land like China, where the language is notoriously difficult, because of the fact that it is not hard to acquire enough of the dialect here to make the nurses understand in a comparatively brief space of time, and by object lesson and the all-comprehensive "Subung sini" (like this) the Ameri-

can nurse is able to carry on her work from the outset, and as time goes on to perfect herself more thoroughly in the eccentricities of the language. But the difficulties, fortunately, are not insurmountable, and there are a number of encouraging features in nursing in the Orient that are not to be forgotten. In the first place, the native nurses have shown a fair degree of "stick-to-it-iveness" which is rather surprising in a land of "Tomorrow," where people are inclined to cease work when they are tired and where there has been no cherished ambition for self-development or anything else much, except a fair amount of simple food and a modicum of clothing.

One can hardly wonder that the native peasant is content with his lot in a land where nature is so lavish that he can cut some bamboo and build and furnish his house, pick breakfast off a banana tree, and sleep comfortably on a split bamboo floor, without worrying over the matter of who is going to pay the bill of the coal man. But in spite of this lack of the hard knocks of adversity that have brought so many Occidentals into the line of duty

Fig. 3. Clinic at Union Hospital, Iloilo.

and prodded them on to success in a chosen vocation, these little Filipino girls have put in several years of honest toil without running away. This is commendable, and a hopeful sign.

In the matter of learning how to nurse, as well as in everything else in this country, the people must be given time to learn their lesson thoroughly; but let them once have the lesson learned by rote and committed to memory past forgetting, and we will have some ground to believe that they will remember it. The one essential for improvement will be, however, a certain amount of persistence in following up this lesson, and their steadfastness so far gives us good hope for the future in this respect, if we only do not desert them too early.

The Government is "trying out" an experiment right now in this matter of endeavoring to discover just how soon the Filipino may be considered competent to carry to completion the ideals the American has been endeavoring to inculcate here. There are many who are skeptical concerning their immediate fitness for self-government at present—most of these skeptics perhaps comprising those who have lived here, in contradistinction to those who have not—but whatever the views concerning the exact time it takes to educate a Filipino properly, the consensus of opinion would be, now that the task has been undertaken, that enough time should be allowed to make the work fairly complete. This holds true in medical work as in other branches, and the fairly praiseworthy persistence of our nurses in pursuing their course to the end is a hopeful sign.

Another pleasant feature in working with these people is their courteousness and teachableness. They obey orders fairly well when they understand them, and, although they are likely to lose their heads in an emergency, yet in the ordinary routine of the daily duties they are quiet and earnest. They are naturally graceful and gentle in their ways, and, when time has ripened these natural graces into professional perfection, these little brown sisters ought to be both "useful" and "ornamental" in a sick room. After all, the "ornamental" element in nursing is of some account, and a quiet, sympathetic demeanor is even more valuable in certain respects than the garnishing of a dish or the neatness of a tray, however immaculately professional the nurse who carries it, and right at this point the Filipino girl may be destined to excel.

But, after all, the most satisfying and sustaining feature of nursing in a mission hospital is the assurance that one is doing something well worth while. The pecuniary remuneration is small and the work is hard, but the completely satisfying reward is the assurance that in such a hospital a nurse is emphasizing every day that she lives the nobler side of her noble profession—its humanitarianism. She is doing the work of a "Good Samaritan," and the harder her task, and the more distasteful it might prove to one who was in the "business" to "earn a livelihood" merely, the more she rejoices to spend her energy in such divine service.

The appeal of the need in a land such as this is its unanswerable argument. In 1907, even in Manila itself—at that time a city of 250,000—the total death rate was quoted as 50 percent and the infant mortality as 60 percent. Dr. Stuntz, of the Methodist board, while home on furlough, told of these "little white coffins" with telling effect, and on one such occasion Miss Fanny Crosby, the blind composer, declared she would "sing" the hospital for which he pleaded into existence. The conditions are better now, but the call is still a ringing one both here and in other more needy fields for the trained American nurse, the woman with a clear brain and a warm heart, whose professionalism is merely a cloak to conceal her real sympathy and love for those who suffer.

A Question of Health.

BY MYRTLE YOUNG,

Physical and Social Director of Nurses, Newton Hospital, Newton, Mass.

Progress is a fact. To read the pages of any journal of nursing convinces one that no group of workers recognizes this more than nurses. The necessity as well as the advantage of furnishing for nurses in training a higher education and broader social privilege is taking deserved space in discussion. Not a few have felt the desire to meet these and other vital needs. The young woman's health is paramount, and it is well to start off with first-

hand information via a physical examination given by school authorities. In case this test shows good health, we appreciate the responsibility and the advantage of maintaining it. On the other hand, it is our duty to the school as well as the young woman to exclude from the nursing forces one who cannot start with this firm foundation for success.

From the beginning of the course, proper care and exercise of that part of the body showing slight weakness may mean in the end all the difference between joy in doing one's work and half-heartedness in its performance. The attention now given in many training schools to the feet of the future nurse is warranted by the results in increased efficiency. Nowhere perhaps are the hours more occupied than in hospital life, and yet fifteen minutes a day spent in corrective gymnastics under the supervision of a competent teacher will give the young woman, who needs some particular exercise for a weak muscle, a strength and energy which will enable her to do the same amount of work better and in less time. Her bodily machine will work without friction because every part will be doing its peculiar duty. In speed and ease it is safe to say that this young woman will give back to her school full value for every minute spent in self-improvement. In one hospital this plan is being carried out through the orthopedic clinic by the doctor in charge and his assistant.

And what opportunity shall we offer the normal girl full of life and energy that she may go through her three years of training and show a higher physical test at its close than when she entered as a probationer? Must we look far in the future for a gymnasium? While its educational features may form no part of a nurse's course, its recreational value is undoubted. The tired brain worker and the toiler in the store or shop find in a local gymnasium play that puts new life into mind and body. So strongly have our great industrial plants felt this need of the men that at their own expense they have equipped gymnasiums and employed instructors. The consensus of opinion among educators is in favor of physical training, and it would seem that a school for nurses has a peculiar need. The life of a pupil nurse is unusually confining, and for the young woman of twenty-one or two is so intensive as to almost be unnatural. A healthy outlet for the play spirit is in recreative games and dances. She is daily taxing her strength too heavily to exhaust herself further in heavy apparatus or floor work in her hours off duty, but games, light drills, and folk dancing are sure to bring the young woman relaxation. Whenever her play hours are spent out of doors, the time is doubly valuable. Where space permits, tennis, archery, skating, and basketball will make a strong call to the open. Even limited roof space can offer the games of the steamer deck.

May we say prophetically in conclusion that effort toward higher physical standards for nurses will react to the benefit of the hospital and later to that larger community, the public which she serves?

A group of five new buildings, modern in every detail and containing the most improved equipment known to medical and surgical science, will be erected by Mount Sinai Hospital, New York City, in the near future. The proposed expansion will represent an expenditure of approximately $1,500,000, and should make the Mount Sinai one of the most efficient disease fighting establishments of its kind in the world. Among the new features planned there will be, in addition to general improvements, a laboratory three times the capacity of the present one, a detention ward, a dispensary for babies and children, with a special ward for nose and throat operations.

Reflections From Many Sources.

"One must see visions and dream dreams before great facts come into existence."

"Work shall be lifted from our hands and carried on to loftier ideals and higher aims by the strong young hands, hearts, and brains of future nurses."

"The woman who would be a success as a nurse needs the combined qualities of a trained mind; capable hands and body and all must be dominated by the soul."

"We look toward the day when the ideal nurse will be the rule and not the exception—her influence felt in homes, in the hospital, in our educational institutions."

"Our methods should be direct, simple, and easy to understand, and the spirit that underlies them should be gentient's comfort. Her candle goeth not out by night."

"Can a woman in any other kind of work find a higher ideal or a greater responsibility? Where human life and health are concerned, what shall we term 'the little things'?"

"Never seek for the soft spots or the easy places; if you get them, you will surely lose golden experiences that will surely be regretted by and by, when the opportunity is gone beyond recall."

"A nurse's personality is a factor that can never be disregarded. Certain qualifications of mind and body may be born in us, but it is always in our power to modify or increase their significance."

"Nurses have unlimited opportunities of using their influence, by voice, pen, and their own lives and work, to bring others to a practical realization of the work that must be done through education."

"Training has given us our definite place in the community, and carried us beyond the confines of creed and of country, beyond the bounds of luxury and poverty, into close communion with the brotherhood of man."

"By night or by day a nurse must be on the alert—she must have presence of mind, she must abound in tact and patience, and be unwearying in her efforts for her patient's comfort. Her candle goeth not out by night."

"Many a woman's success either as a pupil or a graduate nurse is wrecked, not for lack of knowing how to do her work well, but from her ignorance or neglect of the practical application of the ethical side of her profession."

"The every-day management of a large ward, let alone of a hospital, the knowing what are the laws of life and death for men, and what the laws of health for wards (and wards are healthy or unhealthy mainly according to the knowledge or ignorance of the nurse), are not these matters of sufficient importance and difficulty to require learning by experience and careful inquiry, just as much as any other art?"

Members of Washington society attended in large numbers a bridge party given for the benefit of the antituberculosis campaign in Porto Rico. At least $1,000 is needed to equip the tuberculosis hospital recently erected in Ponce, Porto Rico, as a result of the efforts of the Antituberculosis League of the island, and public-spirited women of Washington, including the wives of the secretary and assistant secretary of war, are solving the problem of raising the money. The Antituberculosis League of Porto Rico was formed in 1906, at a meeting attended by American women at San Juan, at the residence of Governor Winthrop. The Ponce branch was organized in 1907.

REVIEWS *of* NEW BOOKS

A Manual of Clinical Diagnosis by Means of Laboratory Methods—For Students, Hospital Physicians, and Professors. Charles E. Simon, M. D., professor of clinical pathology and experimental medicine in the College of Physicians and Surgeons, Baltimore. Eighth edition, enlarged and thoroughly revised. 8vo, cloth. Price, $5. Pp. 809, with 185 engravings and 25 plates. Lea & Febiger, Philadelphia and New York, 1914.

There is little to be said about a scientific book that has gone to its eighth edition with a growing popularity. The work, of course, is up to date in all manner of diagnostic tests of laboratory character, including diagnostic methods of Abderhalden; the technic of the Wassermann reaction has been rewritten in the new volume; the applicability of the complement fixation test to latent gonococcus infections having been satisfactorily established, the technic is embodied in the new edition and should prove extremely useful. Renal diseases have been given special prominence, including modern methods of investigation for both the laboratory worker and the general practitioner. Two hundred and fifty pages of the new edition are devoted "to the essential factors in the laboratory diagnosis of various diseases." This section takes up laboratory findings under diseases, alphabetically arranged, and under each disease is given the essential points of diagnostic significance. This is a new feature in text-books on medicine, and should be an extremely valuable one, not only for convenience in study, but as a time saver and for students preparing for their examinations.

Infections of the Hand—A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Finger, Hand, and Fore-Arm. Allen B. Kanavel, M. D., assistant professor of surgery, Northwestern Medical School, Chicago. Second revised edition. 8vo, cloth. Price, $3.75. Pp. 463, with 147 illustrations. Lea & Febiger, Philadelphia and New York, 1914.

Dr. Kanavel has given us a practical work on a surgery that we meet and have to deal with every day. His book should be of great value not only to medical men, but to those who are responsible for the activities in hospitals, in dressing rooms, wherever there is emergency work to be done, and even for home consumption for those who have sufficient special knowledge to apply the practical devices given in many parts of this work. The author has made a special study in this field, and brings to his task a first-hand knowledge in anatomy, physiology, bacteriology, and pathology. A thumb-rule chapter on "Diagnosis and Treatment" in general makes up a sort of glossary for classifying and finding various kinds of cases under which thé book is divided. Dr. Kanavel has done an excellent thing in this book, and it should be greatly appreciated by the great mass of practitioners, and it should be in every hospital library, obtainable by interns and dressing nurses. The chapters on erysipelas, lymphangitis, and cellulitis seem especially valuable to this particular reviewer, and also the chapters on gas bacillus infections and what the writer calls erysipeloid manifestations. There is a chapter on anthrax, and the book closes with a discussion of complications and the sequelæ of these infections. Taken altogether, it is a very valuable work.

Surgery—Its Principles and Practice—For Students and Practitioners. Astley Paston Cooper Ashhurst, A. B., M. D., F. A. C. S., instructor in surgery in the University of Pennsylvania, associate surgeon of the Episcopal Hospital, assistant surgeon to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. 8vo, cloth. Price, $6. Pp. 1,141, with 7 colored plates and 1,032 illustrations. Lea & Febiger, Philadelphia and New York, 1914.

This new text-book of Surgery is probably the most important publication of the year in any branch of medical science. It has been designed and prepared by one of the foremost surgeons and teachers of the present time. It represents the most modern thought and practice, and reflects the unusual qualifications, literary as well as professional, of its author. Dr. Ashhurst has presented clear and accurate statements of facts, and has placed emphasis on the underlying principles; he has given particular attention to pathogenesis, diagnosis, and indications for treatment, and has completed the whole with adequate descriptions of operations. A remarkable feature of the work is the magnificent series of 1,032 illustrations, which are almost entirely original, and have been prepared especially for it. Each one has been chosen for the information it conveys. The sections on fractures and dislocations and on diseases of the bones and joints will be appreciated by those familiar with the author's excellent monograph on "Fractures of the Elbow." Genito-urinary surgery, gynecology, and orthopedics are discussed at sufficient length to meet the requirements of general surgeons.

Vacuum Cleaning Systems—A Treatise on the Principles and Practice of Mechanical Cleaning. M. S. Cooley, M. E., mechanical engineer in the office of the supervising architect of the treasury. Price, $3. Pp. 232, with 105 illustrations and 20 plates. Published by the Heating and Ventilating Magazine, 1123 Broadway, New York.

This octavo volume of 232 pages is in reality a scientific treatise for engineers and for mechanics scientifically interested in the evolution of mechanism for cleaning purposes. The author develops his subject from the point when mechanical cleaners were first put into use in the form of mechanical brooms in 1880. These brooms evolved into the ordinary carpet sweepers of today, and are the basis of the more modern renovators operated by large steam plants. It is an easy step from mechanically geared sweepers and renovators to vacuum apparatus. The book goes into various types of these latter devices, describing in detail the principles of each, with tables indicating their relative efficiency under given conditions. The book also goes into detail for testing the efficiency of various types of cleaning machines, and includes specifications for the benefit of architects and contractors. This book should prove especially valuable to hospital architects and those administrators who take a personal interest in the mechanism of the things they use in their institutions, especially just now when we have recovered from the first burst of enthusiasm over the universality of these mechanical cleaning devices and when we are coming down to a point of their definite analysis for various purposes in our institutions. The writer of the book is careful not to commit himself to an advocacy of any particular type of machines for any purposes.

QUERIES *and* ANSWERS

An Objectionable Staff Member.

To the Editor of THE MODERN HOSPITAL:

We have a man on our medical staff who is objectionable to everybody—to the other doctors, the nurses, interns, and everybody who has to work with him. But he is so strong socially and in a business way—and professionally, too—because he is a good doctor, that the board is afraid to drop him or even to call him down, even for his brutality to the nurses. Is there any way we can get rid of this man? A WORRIED SUPERINTENDENT.

You have one of the hardest problems in the hospital world on your hands, and one of the commonest. You are the representative of your board, you know, and must help them solve a problem they, too, are worried over. The best way to begin is to make a careful analysis of the objectionable one's value to the hospital. Do it fairly, because a good deal may depend on the outcome. First, take the financial side. How much is he worth in dollars and cents in the course of the year? How much money have his patients paid to the hospital during the past year, and how much of that was profit to the institution, because some doctors demand so much that even their highest paying patients are actual losses. To make this analysis you should have the total number of patients sent in and the length of stay, the amount each paid in, and for what. If your bookkeeping does not show these facts, it ought to, and you should make it do so in the future. Then take each of his cases and analyze it; how many could he have sent to another hospital or treated at home or in his office, and how many and which would have come to the hospital anyway and had another doctor—in other words, can he control his clientele with respect to the hospital? Is his presence on the staff bringing or holding annual subscriptions or adding in any way to the financial support? If he were dismissed, would any part of the income be lost or any gift funds be diverted to some other institution? This is your financial analysis, and the results will appeal strongly to your board, unless there are personal relations that would outweigh the facts.

Now take the intangible things. Does he occupy a professional place that could not be filled by one of the other men—not today perhaps, but in a year or two? Is he so much better as a physician or surgeon that he would be a distinct loss to the sick? Could someone else, more agreeable to work with, give your sick as good care? Are you quite sure that, after all, his "brutality," as you term it, is not in the interest of wholesome discipline, and, though intensely disagreeable at times, does not his influence contribute to better technic, more rigid enforcement of needful rules, and an all-round better service on the part of everybody? Some of these "brutal" men have a "method in their madness," you know, and are merely strict disciplinarians—with an intensely uncomfortable way of going about it.

Then, after you have weighed all the facts, and placed them before your board, or before some sympathetic, but hard-headed member, how would it do to get the board's permission for you to "have it out" with the doctor? But do not allow yourself to be betrayed into such a conference unless the board has agreed to stand by whatever you do, because the doctor might defy you—then where would you be?

On the other hand the doctor might tell you some things, with all "the cards on the table," that you had not known before, and that would modify your opinions on the subject. There are always possibilities of there being two sides to the case. But such a conference as we are thinking about, in quite unmistakable English, will very often clear the atmosphere and result most happily, especially to the one who has the right side of the argument.

How to Create a Hospital.

To the Editor of THE MODERN HOSPITAL:

We have a typical western city, with a population of 14,000, and with a prosperous farming country around us. There are twelve doctors, three practically retired, two specialists—nose, throat, ear, and eye cases; there are no mines or mills to speak of, excepting one planing mill, a furniture factory, and a number of small manufactories. There is one small hospital that is owned and conducted by a doctor who alone sends patients there; it does not stand very high. Then, there is a private sanitarium—for mental and nervous cases, and I think alcoholics and "dope fiends."

We think we should have a good hospital, but are not sure we could support one. I should have said that the nearest large city, with a state university hospital, and high class medical men and surgeons, is fifty-five miles away, on rather uncertain transportation line, with trains only twice a day each way. We have almost no strictly dependent people in our town, but a good many who are in very modest circumstances—families that must live on $50 or $60 per month and pay small house rent; and we have no very rich people, and only forty or fifty families that have more than a living income without working or doing business; but we have a good many prosperous merchants, most of whom are as liberal as their means will allow.

Do you think we could support a hospital, and, if so, how large a one do we need, and how should be go about it?
T. W. H. (A WESTERN TOWN).

You should certainly have a hospital, and you can support one. So, without going into arguments as to the whys and wherefores, here is about what you need. Plans should be drawn for a 100-bed hospital, U-form, with the points toward the south. Build one wing and the joining line, this last to be administration, a temporary home for nurses, and operating rooms on the top floor, facing north. This will make a right angle, with 50 patients in the wing; the other wing can be built later when the need is developed. You can build this building for about $100,000; the other wing, later on, will cost only about $50,000.

Now, to go about the business. Get your newspapers to press the need of the hospital on the public. Pick out instances here and there to show this—there will be plenty of them. Then get a dozen of your most progressive citizens to sign a call for a mass-meeting, and see that the meeting is written up and talked about. See that those who signed the call also attend. At the meeting have a lot of enthusiasm and good speeches. If your doctors are harmonious, get them to the meeting. Let some of them speak, but have it definitely stated by somebody in authority that the hospital is to be an "open door" institution, so far as the doctors are concerned—"fair for all, favors for none." Appoint a very large committee or twenty committees to raise funds on a subscription list, and a very small committee to see about plans. Do not elect any permanent boards until you get your money raised, and do not let any plans be shown until then; indeed, if there are two or more architects in the town, it will be

better not to choose until the money is all subscribed. Have just as many people as possible at work until the money is raised, and afterward just as few. The permanent board should be large and representative of all religions and other interests. Have a woman's auxiliary board, but never let them buy anything for the hospital; confine them to schemes for raising money.

In planning the hospital, have some private rooms, and some wards of 2, 3, 4, and 6 beds, but make no plans for free patients. Take care of your charity work out of special funds raised for the purpose. In this way you can have a self-supporting hospital—yes, you can, and your charity work must be financed otherwise.

Before the plans are completed, employ your superintendent, who should be thoroughly experienced in hospital administration, and let him or her criticise the plans—not necessarily to undo all that has been done, as some badly informed persons would want to do because they had not made them originally, but for their criticism and advice. Then build your hospital, and run it so well that whoever got sick in the community would want to get to it just as quickly as possible. Treat all the doctors alike, and give them what they need to do their best work.

If you do these things, your hospital will be a success—the one best asset of your community.

Operating Room Costs.

To the Editor of THE MODERN HOSPITAL:

We are charging $3 for the operating room for local anesthesias and $5 for general anesthesias. Our surgical nurse insists that the expense to the hospital is practically the same. Is this true, and, if not, what is the difference?

J. M. W., MICHIGAN.

It is not true that the cost is practically the same, but the exact difference is not easily fixed. In a local anesthetic, which is usually for operations on the nose, throat, or the eye, we use very little dressings, almost never anything more than small sponges, and these are not wasted, because they are washed and used again. For the anesthetic itself we use either cocain in a 4-percent solution or the Schleicht formula, which comes in the form of tablets, and almost none of the solution is wasted, and the anesthetic costs only a few cents—perhaps 5 cents would be a liberal allowance for the actual cost. In nose, throat, and eye operations not very many people are occupied, and usually only three people are cleaned up—the doctor, his assistant, and the clean nurse; oftentimes the assistant does not clean up. This means two or three pairs of gloves, but there is very little rough work about operations in the throat and on the nose, and consequently not very many gloves are put out of commission—let us say one pair of gloves to three operations. About half the instruments are used in nose and throat operations as against laparotomies, perhaps not even so large a proportion. This means that the work of cleaning and sterilizing the instruments is about half that required for the general anesthetic. There is almost as much work to prepare for and clean up after the local as for a general anesthetic, and I imagine that your surgical nurse was thinking in terms of labor and trouble rather than in dollars and cents when she was figuring on costs.

Now let us see what the general anesthetic costs. Usually a laparotomy drum is pretty well exhausted in a laparotomy, and this means the washing, drying, counting, and sterilizing of the contents, which is quite a job. I imagine that it would take two hours of actual working time of one pupil nurse to prepare the contents of a drum for use. The expenditure for actual dressing material is not great even in a laparotomy, because things are cleaned and used again, but more people will clean up for a laparotomy; perhaps an average of five people will wear gloves, and an operation will usually cost about one pair of gloves by actual destruction. In the matter of laundry, there is not very much to choose between the two operations. If gowns are changed after each operation, local and general, and, counting sheets and towels, face and head cloths, there would be an average of pretty nearly twenty pieces in either case. The average general anesthetic will require a half-pound of ether, and even where less is used the residue generally goes to the solution bottle for the preparatory room. A half-pound of ether costs 25 cents. In the general anesthetic there is usually a certain amount of catgut used—say, two tubes at an average cost of about 10 cents a tube.

Figuring along these lines, we have an actual expenditure for material, in the case of a general anesthetic, of half the price of one pair of gloves—because the gloves can be used for dressings afterward—say, 25 cents; ether, 25 cents; catgut, 20 cents; dressing material—including solutions, gauze, cotton, tissue, silk, thread, and the like—say, 20 cents, or a total of 90 cents for the general anesthetic, which we do not have in the case of the local; and against these charges in the case of the local we have, say, 5 cents for the anesthetic and 15 cents for gloves, or a total of 20 cents, making the difference in cost about 70 cents. The work of the nurses is a great deal more for the general anesthetic. The general operating room is usually large, and a good deal more furniture has to be cleaned. Perhaps it takes twice as much work to prepare a room for the general anesthetic as for the local. It generally takes three nurses twenty minutes to prepare for a general anesthetic, including the preparation of the patient, and it takes quite as long to clean up afterward; meaning that in actual performance of labor it would take one nurse two hours to clean up, and, if it has taken one nurse two hours to prepare the laparotomy drum, it means that each general laparotomy costs four hours of labor of one person. In the nose and throat room this same work would be reduced to perhaps one hour for one person, or a total difference of three hours of labor for one person and 70 cents in money. Very many of these assumptions may be disputed by the surgical nurse who is closer to her field of operations, and discussion on this subject would be welcome in the columns of THE MODERN HOSPITAL.

The Empire Hospital, London, is an institution recently opened for persons of moderate means unable to afford an expensive nursing home. It is the first and only institution of the kind in England, and is constructed on the most modern hygienic principles. Each patient has a room, and the two operating theaters for minor and major surgery are separate. Another room is set apart for operative treatment of septic cases. The electric installation comprises an x-ray room, a Nauheim bath, dowsing, radiant heat, electric light, and hydroelectric baths. Any physician, surgeon, or practitioner of medicine may send his patients to this hospital, and patients are attended in all cases by their own doctors.

Miss Helen Scott Hay, superintendent of the West Suburban Hospital, Oak Park, Ill., and a Red Cross nurse, has been paid a very high compliment by Queen Eleanor, of Bulgaria, who, it was announced some time ago, would visit the United States this summer for the purpose of inspecting the leading hospitals of the country. The queen is desirous of establishing in Sofia a modern training school for nurses, and has selected Miss Hay to organize the institution and act as its superintendent for the first four years. Queen Eleanor is herself a graduate nurse from a Russian school, and served under the Red Cross in the Russo-Japanese war. At present no complete courses for nurses are offered in Bulgaria.

GREEN AND BLACK OPERATING COLORS.

St. Luke's Hospital, San Francisco, Tries Out New Color Scheme, Which Is Enjoyed by Operators.

The problem of the color scheme of the operating room has not yet been solved. Hospital boards want the "all white" effect to make "show places" of operating suites. A number of hospitals have led departures from the established white enamel—Dr. Corwin, of the Colorado Fuel and Iron Company, at Pueblo, who treated his operating rooms in lead grays, and Dr. Carrell, of the Rockefeller Institute, who adopted black, including black garments and black face and head cloths.

A unique departure has been made in St. Luke's Hospital, San Francisco, where Dr. H. M. Sherman, of the Polyclinic of that city, has inaugurated "spinach green" colors. Dr. Sherman has written the story of his new operating rooms for the *California State Journal of Medicine*, to which we are indebted for the facts and for the accompanying illustration:

Operating room in St. Luke's Hospital, San Francisco, as arranged by Dr. H. H. Sherman.

"The discomfort I have had in the present-day white operating rooms led me to suggest that we have dark floors and wainscots in these rooms," says Dr. Sherman, "so that the operator who looks up from a wound shall not encounter a glare of light and find his eyes useless for a moment as he looks back into the less well illuminated wound. The color scheme, it seemed to me, should start from the red of the blood and of the tissues, and therefore I advised that green, the complementary color to red, should be chosen for the color of the floor and wainscot. The particular shade of green to be selected was that which was complementary to hemoglobin, and it was found to be the green of the spinach leaf. Incidentally it may be stated that the iron in the chlorophyl of spinach is said to be in the same chemical combination as is the iron in hemoglobin, but I know nothing of the value of this in making spinach green complementary to hemoglobin red.

"A room painted in this way, the floor and the walls for six feet from the floor a bright spinach green and all above a glazed white, was matched for use against a room painted a glazed white—floor, walls, and ceilings—in the little operating pavilion built at St. Luke's Hospital just after the fire. No one who could get into the green room to do an operation ever went into the white room, and after some months of this experience the point was accepted as settled sufficiently to warrant the innovation of a room similarly colored in the operating suite in the new hospital. Here, however, we could not get in tiles as close an approximation to spinach green as we could in paint; the tile for the floor had to be duller and darker and that for the wall darker, but the two shades harmonize, and answer the purpose perfectly of preventing the bright daylight from being reflected upward from walls and floors into the eyes.

"Above the level of the six-foot green wainscot is white encaustic tiling to the ceiling, and the ceiling itself is a bright buff. This arrangement imitates fairly well the optical environment out in the fields or among low bushes, where the ground of the surroundings, to above the level of the eyes, is green, and the sky overhead is full of white daylight. This again is the optical condition for which the eye was originally adapted by natural selection, and it seems only right to reproduce the condition for the eye when it is to be relied on for quick and accurate work; while the conditions of greatest eye-strain—the dead white and glare of snow on ground and bushes—is the optical condition reproduced by the white rooms and the white furnishings.

"At first ground glass in the windows was tried, but this was changed to clear glass as giving more light from a desirable direction. In course of the experimental work it was found that the light reflected into the operator's eyes by the white sheets and towelings was as dazzling and as interfering as was that reflected from the floor, and so the same color scheme was followed out, and green toweling and green sheets of galatea were provided. The color in these, however, did not stand the superheated steam in the sterilization. They became a dingy gray. I then decided to surround the whole operation field with black, as giving a surface from which no light whatever could be reflected, using it around all wounds, as I had used it around the mouth in cleft-palate operations and around the vagina in operations there. I not only had sheets and towelings of black, but I had black gowns

made, and the coverings for the instrument tables were all of black, and I found that they were exceedingly satisfactory. The only objection I have heard urged against them was the superstitious fear that people coming up for operation would see this somber accouterment and consider it a color of bad omen. This has proved to be a groundless fear, for patients who have had work done upon them under local anesthesia have expressed no objection to the black dress of the operator, nurses, and room."

Dr. Sherman says that operators like the new green and black effect, with the light coming from the light buff colors of the upper walls and the ceiling, for he says:

"The eye was not compelled all the while to receive light rays from every direction when the only rays it wished to receive or needed were those that came from the wound itself. Under ordinary conditions the eye might be considered as trying to keep out, by pupil contraction, all the extraneous light, and at the same time trying to let in, by pupil dilation, all it really wished to get from the wound; all of which was a definite overstrain of the accommodative and visual capacities of the eye, which would conduce certainly to nerve fatigue and consequently to general fatigue. Indeed, it has not been uncommon in this and other hospitals to hear nurses who had to spend a good part of the day at their duties in the operating room complain of the effects of the brilliant white environment. I think we should have long ago learned this lesson in optics from our coworkers in the laboratories, for no one ever saw in a laboratory where the microscope was to be used, white tables, benches, and shelving. On the contrary, these are stained a dead black.

LETTERS TO THE EDITOR

Insufficient Humidity.

To the Editor of THE MODERN HOSPITAL:

In the June number of THE MODERN HOSPITAL is a laudatory notice of an air moistener that hangs behind the usual radiator. For the increase of bodily comfort and health in winter, when all indoor air is robbed of its moisture by heating, and is often drier than that of arid deserts, nothing can be more desirable than an appliance that will restore to the atmosphere the moisture it should normally have—50 to 60 percent of the saturation point—but all such appliances as you refer to are so utterly inadequate as to be not worth their cost and trouble. Their installation is merely a recognition of the need and an expression of a willingness to meet the need. The actual amount of water evaporated by them is trifling as compared with the amount needed. However difficult it may be to meet the situation in residences, there is no excuse for the modern hospital not being specially provided with a central equipment to meet this very urgent need.

JAMES W. WALKER, M. D.,
1504 East Fifty-third street, Chicago.

Through the influence of "The Altruists," a charitable organization composed of some twenty-five women of Memphis, Tenn., the bachelors of that city are supporting a baby hospital and fresh air camp during the heated season. This is the second summer of the institution, and much interest in its activities is developing. The bachelors who subscribe to the fund are organized, and it is said that any member of the club who fails to come to time with his contribution is promptly "arrested." The camp accommodates 100 babies at a time.

St. Louis has won a big victory for clean milk. The bill drafted by the board of health was passed almost unanimously by the municipal assembly. It provides for the rigid standard for milk that the department of agriculture recommends. In future all milk dealers must register with the board of health, with whom is vested the power of giving or revoking permits. One year after date of the bill's passage all milk dispensed in St. Louis is to be either pasteurized by the Held method, or come from cows that are inspected by the board of health.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Save your burnt-out electric light bulbs if you have many of them. Put them in a barrel in the basement or storeroom; there is a ready market for them at 5 cents each in quantities.

When you buy paint or varnish, do not let the appeal of price guide you, for in few things is the truism that you don't get any more than you pay for exemplified as it is in paintstuffs. The product of a reputable manufacturer and of a known brand is the best safeguard.

A mixture of rottenstone and crude oil is an excellent means of cleaning and rejuvenating stained woodwork, floors, table tops, and the like. If the object is a level surface, sprinkle with the rottenstone, sluice with oil, and with a piece of waste or flannel rub first with a rotary motion, then with the grain until a clean-looking dull gloss finish appears.

A strict measure of justice goes a long way in dealing with those under your roof. Keep your promises to the letter, and make good on your threats when you have to use them. Don't call a scrub woman to account for an infraction of a rule and then allow a surgeon or board member to break it with impunity. You are superintendent of your hospital.

In no line, medicine and surgery included, has there been developed more specialism than in mechanics, and the day of the handy man or all-around mechanic, who was equally efficient in mending the roof or repairing the furnace is past. Do not let the local locksmith tinker with the elevator motor or the "umbrellas to mend" man patch a leak in the sterilizer. Even if you have to wait to get the right man for the job, it is wiser, and the ultimate maintenance cost will be much less in the end.

During the hot "dog days" of the summer, when the mingled odor of ether and kitchen insist on pervading the hospital, considerable relief can be obtained by placing an electric fan, 16-inch or larger, about three or four feet from the floor at the head of the ward or corridor and facing the general trend of ventilation. About twelve inches in front of the fan and on a level with its pedestal place a bottle of lavender or smelling salts, and a faint, clean odor will soon be noticeable over a considerable part of the building, and the air will seem markedly vitalized.

The economy of effort presents an interesting and profitable study in the hospital, and an analysis of a given service will show in many instances a surprising amount of lost motion in its performance, and the profitless expense of energy on the part of the active staff of a hospital in the course of a year would furnish enough power to run the elevators. How far do you have to reach for the object that you use most often? Where are you most apt to be when called on the telephone, and wouldn't it be advisable to have an extension to that vicinity? In leaving a room at night, do you have to retrace your steps to the far side to extinguish the light or is the switch near the door? These and a multitude of other energy leaks may have considerable to do with the tired look on many hospital faces.

Elixir of Enzymes

ELIXIR OF ENZYMES is a palatable preparation of the proteolytic and curdling ferments. It is recommended as a gastric tonic generally and especially in correcting faulty proteid metabolism. Elixir of Enzymes is an excellent adjuvant and vehicle for exhibiting iodids, bromids, salicylates and morphin. One dram of Elixir of Enzymes will dissolve 46 grains of potassium iodid, 45 grains of sodium salicylate, and 17 grains of potassium bromid.

Elixir of Enzymes may be used for making junket or curds and whey. Add one teaspoonful to half pint of lukewarm milk, stir thoroughly and let stand until cool.

For minimizing the organic disturbances and eliminating the corrosive effect of potassium iodid the following combination is recommended:

Potassium Iodid, 2 ounces.
Distilled Water, enough to make two fluid ounces.

To exhibit, for instance, 20 grains of potassium iodid three times daily, use one teaspoonful of Elixir of Enzymes, one teaspoonful of the above solution to half pint of lukewarm milk; stir thoroughly and let stand until cool. Take one-third of this quantity as a dose. This junket should be made up fresh every morning.

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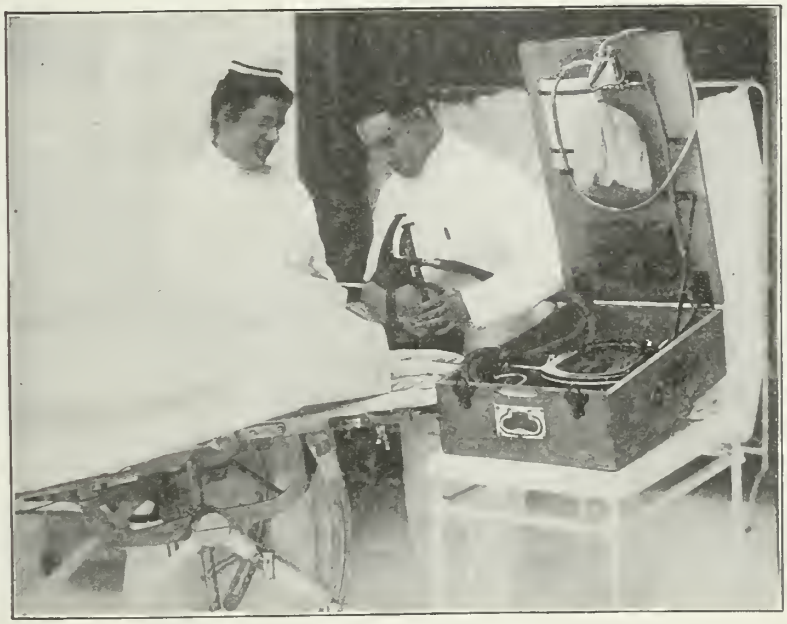

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It is a scientific instrument, and its reputation is based on service performed, having saved more than 500 lives. The sale of this instrument was not promoted until its value was thoroughly established. Hundreds of hospitals and prominent physicians will back up our statements.

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ARCHITECTURAL AND BUILDING NOTES

Billings, Mont., is to have a new contagious disease hospital.

The Colorado State Insane Asylum at Pueblo is to have a new $10,000 kitchen.

St. John's Hospital at Springfield, Mo., is soon to have a new $25,000 addition.

A $70,000 building is being erected for St. Luke's Hospital at Marquette, Mich.

An emergency hospital is being built at Oaklawn, Ill., by the C. & E. I. Railroad.

A new 250-bed building is under construction for the Augusta (Ga.) City Hospital.

Miss Ethel Wood has been elected superintendent of the Owen Sound (Wash.) General Hospital.

The Homewood Sanatorium at Warren, Pa., which was destroyed by fire February 6, will be rebuilt.

A hospital is soon to be built at Coldwater, Mich., for the crippled and incurable children of the state.

Butterworth Hospital, Grand Rapids, Mich., is building an addition, and will soon install a new laboratory.

Dr. H. H. Bellwood and Dr. Hand, local physicians of Alliance, Neb., will open a hospital in that city soon.

Plans are being revised for a two-story brick municipal hospital, 32x100 feet, to cost $20,000, for Millville, N. J.

Drs. T. C. Richards and N. M. Smith, of Fayette, Mo., are planning the establishment of a hospital in Fayette.

The French Hospital of New Orleans has under construction an addition which will add materially to its facilities.

A four-story building, 60x100 feet, is being planned for the Northeastern Hospital, Allegheny avenue and Tulip street, Philadelphia.

St. Mary's Hospital, Hoboken, N. J., is adding a wing. One of the features of the new structure will be a roof garden for tubercular patients.

Ypsilanti, Mich., has good prospects for a public hospital. Augustus Beyers, a retired farmer, has offered to donate $40,000 to erect a building.

A home that will accommodate 150 nurses will be added to the Barnes Hospital group in St. Louis. According to the plans it will cost about $150,000.

A movement is under way at Yazoo City, Miss., for the establishment of a hospital to be under the control of the local organization of King's Daughters.

The Chester (Pa.) Hospital is building a new addition for the nurses' home, which will be a brick two-story building 35x50 feet, to cost about $8,000.

Sisters of the Incarnate Word, of Beaumont, Texas, have asked for bids on a four-story brick and stone addition to Hotel Dieu, to cost about $100,000.

Work has been commenced on a new three-story brick and stone building for the Red Cross Sanatorium at Louisville, Ky. This is a negro institution.

A modern four-story hospital is soon to be erected for the Union Benevolent Association in Grand Rapids, Mich. It will be a gift from John W. Blodgett, a prominent citizen.

Good cheer in the sickroom "doeth good like a medicine."

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The Welch Grape Juice Company, Westfield, N. Y.

recently held at Durham. Miss McDuffie stood first and Miss Hunter second.

A municipal detention home for women is to be erected in New York City on West Thirtieth street, between Sixth and Seventh avenues, at a cost of $450,000.

A company is being organized to locate a sanitarium near Kramer, Cal. The climate of this section is said to be especially favorable for the treatment of hay fever and asthma.

Dr. J. C. Thomas, for the last six years connected with the Temple (Tex.) Sanitarium, has opened a hospital in Taylor, Tex. Three of the local physicians are associated with him.

The Beth Israel Hospital Association of New York City is reported to be contemplating the erection of a million-dollar hospital somewhere on the lower east side of the city.

A building for the treatment of incipient tuberculosis exclusively was completed in June for the Missouri State Sanatorium at Mount Vernon. The cost was approximately $35,000.

A $50,000 building is being erected at the Southwestern Texas Insane Asylum, San Antonio. It will accommodate 117 patients, and is to be fireproof and modern in every particular.

The Lebanon Hospital, of Philadelphia, is now established in its new quarters on Seventh street above Columbia avenue, recently remodeled and equipped at an expense of $25,000.

A four-story dispensary building will be erected at Gouverneur slip and Front street, New York, to be maintained by the city. The cost of the new dispensary is estimated at $200,000.

The old nurses' home of the Cleveland (O.) City Hospital is to be converted into a hospital for the treatment of social diseases. Efforts will be made to isolate all Cleveland cases in this hospital.

A new building is in course of construction for the Budge Hospital at Logan, Utah. It will be three stories high, and will be built mainly of cement and steel. The cost is estimated at $30,000.

The town of Vinton, Iowa, will soon receive a bequest of $50,000 with which to found a hospital. The sum was provided for in the will of the late Mrs. Virginia Gay, who resided in Vinton for many years.

The Eastern Kentucky State Hospital for the Insane at Lexington is soon to have a building for the treatment of tubercular patients. The structure will cost $300,000 and have accommodations for 50 patients.

The trustees of Burlington Hospital at Burlington, Iowa, have approved plans for a nurses' home to be erected at a cost of $10,000. The new building will have accommodations for thirty-six nurses.

The last class to graduate from the William W. Backus Hospital Training School for Nurses, Norwich, Conn., under the two-year system, received their diplomas June 9th. The school now has a full three-years' course.

Under the will of the late Charles Geunchi the State Orthopedic Hospital and the Home for Dependent Children at Lincoln, Neb., will receive nearly the whole of an estate left by him amounting to over $100,000.

Members of the Arkansas State Medical Society and the University of Arkansas Alumni Association are agitating a movement for a state charity hospital to be under the control of and in connection with the university.

Mrs. Russell Harding, of New York City, formerly of Toledo, has donated $10,000 to the Toledo Hospital, with which to build an addition to be known as the Harding Ward for Incurables, in memory of her husband.

Miss Jessie May Ervin, formerly superintendent of the Neuronhurst Sanitarium at Indianapolis, has been installed as superintendent of the Dukes Hospital at Peru, Ind., succeeding Miss May Sharp, who recently resigned.

Work was begun in April on a new $40,000 structure for the National Jewish Hospital for Consumptives at Denver, Colo. The building will be the gift of Samuel

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This Ether Sulphuric for anesthesia is prepared by a special process of purification by which all of the impurities that are ordinarily found in Ether are entirely removed.

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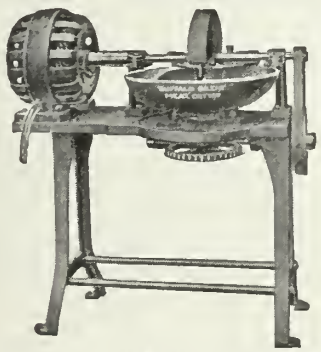

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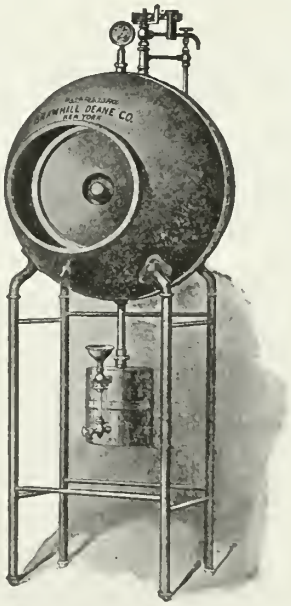

present the advantages of Simplicity of Construction, Maximum Durability, and Absolute Safety — Unfailing Sterilization and Perfectly Dry Dressings Assured.

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Grabfelder, of Philadelphia, who is the president of the hospital association, and will increase the capacity of the institution twenty patients.

Work will be begun soon on a $30,000 addition to St. Francis Hospital, Wichita, Kas. The building will consist of three stories and basement, and will be of brick and stone construction. It will contain twenty-five rooms.

A farm of 150 acres in Hunterdon county, N. J., has been selected by the National Brotherhood of Operative Potters as a site for a sanatorium to be established by the Brotherhood for the care and treatment of members afflicted with tuberculosis.

Mr. Morris Harrison, who resigned the position of superintendent of the Muhlenberg Hospital, Plainfield, N. J., in April, has been appointed superintendent of the Jersey City Hospital after having received the highest percentages in a civil service examination.

The management of the Red Cross Society has recently leased the Davidge property, Seventeenth and H streets, Washington, D. C., for its future home. The building is well adapted for the purpose and conveniently situated within one square of the War Department.

It is not a new thing for the churches to get into the hospitals, but it is rather unusual that the order is reversed. Nevertheless, one of the features of the building soon to be erected for the First Baptist Church at Terre Haute, Ind., will be an emergency hospital.

The Sisters of Charity of the Incarnate Word are erecting a hospital at Beaumont, Tex. It will be a three-story structure, built of brick, and will contain about forty private rooms in addition to office, operating room, laboratory, etc. The cost is to be about $50,000.

Work has been begun on the first wing of the Christian Church Hospital to be erected in Kansas City, Mo. This wing will be of concrete construction, four stories in height, and will cost $190,000. It is expected this part of the building will be finished by July 1, 1915.

Congress has appropriated $300,000 for a new municipal hospital at Washington, D. C. The institution has been named the "Gallinger Hospital" in recognition of the interest the senator from New Hampshire has taken in the public affairs of the District of Columbia.

A 960-acre tract of land in Boone county, Iowa, near the town of Woodward, has been selected by the Iowa State Board of Control as a site for the Epileptic Colony to be established by the state in the near future. Buildings to cost approximately $100,000 will be erected.

The state of Arizona is taking steps toward caring for Arizona people who are confined in hospitals for the insane in other southwestern states. In the event that the plan is carried out, it is expected that insane patients from other states now in the Arizona asylum will be returned.

The Good Samaritan Hospital of Zanesville, Ohio, has abandoned its plan of soliciting funds for the purpose of building an annex to provide needed additional room, but will add a story to the structure now in use, which will make it possible for the institution to accommodate twenty patients more than heretofore.

Miss Anna Davis, R. N., formerly in charge of the Florida East Coast Railway Extension Hospital at Miami, Fla., is now with the Florida Hospital for the Insane at Chattahoochee, where she has inaugurated a nursing service in the new receiving hospital. Miss Davis is the president of the Florida State Board of Nurse Examiners.

At a recent meeting of the board of directors of the Utica (N. Y.) Homeopathic Hospital it was decided to erect a new, modern building on the site of the present structure. The new building has been made possible, it is stated, through a bequest of the late Morton B. Coombs. It will probably represent an expenditure of $100,000.

Satisfactory results have attended the experiment of appointing a visiting trained nurse in Chilton county, Ala. The county authorities, with the aid of private subscriptions, succeeded in raising $1,500. Of this $960 was paid to the nurse in salary, and her actual expenses, which included a horse and buggy, were paid. She organized mothers' meetings throughout the county, and gave practical talks on the control of contagious diseases and the

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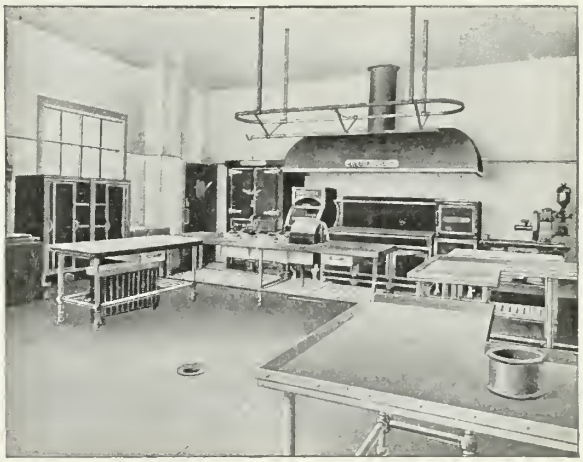

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care and feeding of infants. Reports from both physicians of the county and the school teachers speak highly of her work, and the experiment will be extended to other counties in the state.

According to a newspaper report, lovemaking will hereafter be tabooed at the Minnesota State Sanitarium for Consumptives at Walker. Dr. Beach, the superintendent, says that "love-in-idleness" is a common form of mischief in sanitarium life, and is of the opinion that patients who combine flirtation with their treatment have a poor chance for recovery.

Improvements that will involve the expenditure of $275,000 are under way at the Southwestern Insane Asylum, San Antonio, Texas. The new buildings will accommodate 600 patients in addition to those now in the institution, and will enable the state to care for all of the insane persons now in jails, poorhouses, and other hospitals in Texas.

With a bed capacity of 1,053, Charity Hospital of New Orleans in 1913 cared for a total of 15,056 indoor patients. In the out-clinics 27,644 patients were treated and 107,196 consultations were given. The gross death rate for the year was 11.72 percent. Deducting those patients who died within thirty-six hours after admission, the net death rate was 7.9 percent.

At the annual election of the Pennsylvania Society for the Prevention of Tuberculosis the following officers were elected: president, Dr. Charles H. Rhoads; vice-presidents, Dr. Joseph S. Neff, Dr. William Duffield Robinson, Dr. William Charles White; secretary, Dr. Ward Brinton, 1423 Spruce street; treasurer, Mr. F. A. Evans; solicitor, Mr. Ralph J. Baker.

Employees of the Kansas City General Hospital who have been in the service one year or more will have a two weeks' vacation this summer, according to a recent decision of the health board. At the same meeting the board decided not to pay the salaries of hospital attaches while ill, although granting them free treatment and hospital accommodations.

Persons making application for the adoption of children certified by the Chicago psychopathic laboratory must hereafter stand the psychopathic test themselves and qualify. This is according to a recent decree of municipal Judge Goodnow, who asserts that the mentality of many applicants for babies is not higher than that of a normal person at 17 years of age.

The physicians of Baltimore, Md., are working for a bond issue that will give the city a 300-bed hospital for contagious diseases. It is pointed out that the number of beds available for isolation purposes is very low in comparison with such facilities of other cities, and that Baltimore would be seriously embarrassed in the case of an epidemic of a contagious disease.

From the statistics prepared by the State Board of Health it is seen that in 1909-10 the death rate from tuberculosis of all forms in Mississippi was 126.9 compared with 168.7 in the area outside, while the rate from pulmonary pneumonia was 117.2 compared with 146.8 outside. Mississippi leads in the number of deaths from hookworm, the ratio being 4 to 1 on the outside.

Mr. Joseph Purvis, superintendent of the Madison General Hospital, Madison, Wis., has resigned that office and has been elected superintendent of the new West Suburban Hospital, Oak Park, Ill. Mr. Purvis, who was for a number of years superintendent of the old Baptist Hospital, Chicago, had his training as a hospital executive in the Cook County Hospital. He will assume his new duties July 1.

Sacramento had a model military camp in point of sanitation and comfort for 320 picked high school cadets from all sections of northern and central California, under orders to assemble at the American River range. The encampment was held jointly under the jurisdiction of the adjutant general's office and the War Department. It lasted four days and the boys were instructed by regular army officers.

Miss Katherine Wheatley, an English nurse who trained at Westminster Hospital and for some time at Fulham Infirmary, has been asked by the Turkish Government to organize a system of trained nursing in Turkey. Miss

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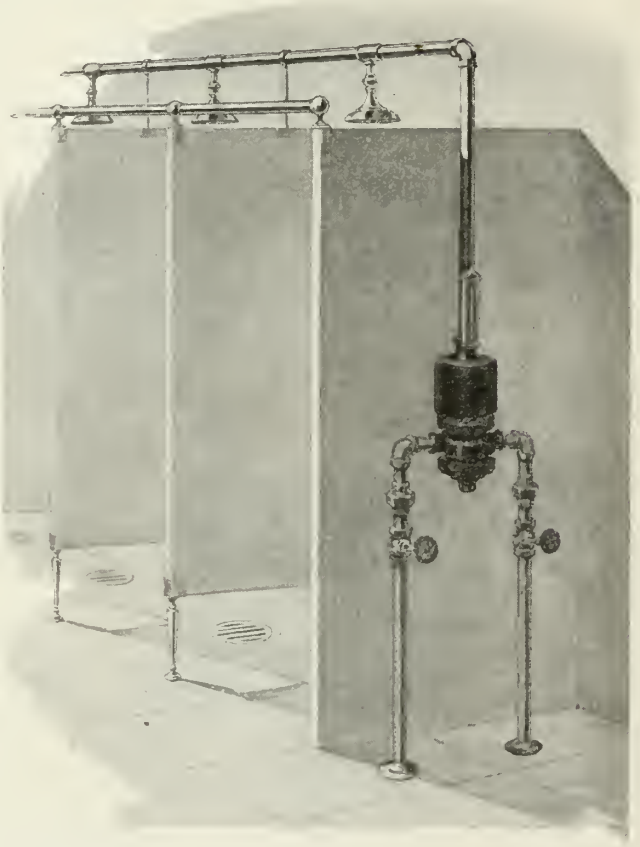

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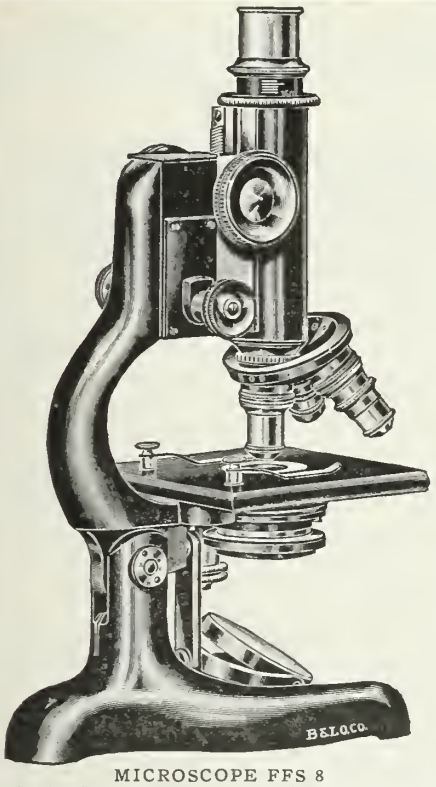

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Wheatley did excellent work during the recent war, and her new appointment will include the matronship of a large native hospital, which will be used for the first time as a training school.

At the recent convention of the California Nurses' Association officers were elected as follows: Mrs. Amos W. Evans, of Alameda, president; Miss I. Pickhardt, of Pasadena, vice-president; Miss Maybel Wilson, of Sacramento, second vice-president; Miss Clara Saunders, of San Francisco, treasurer, and Mrs. J. H. Taylor, of San Francisco, secretary. By a vote of 65 to 10 the nurses opposed the proposed universal eight-hour law.

The new Kansas State Tuberculosis Hospital at Norton, Kan., for which the last Legislature appropriated $50,000, will be opened for patients September 1st. The first pavilion, 142 by 46 feet, with quarters for 16 patients, will be completed then, and as rapidly as possible nine other units of a similar size will be opened. The location of the hospital is said to be almost ideal. It is four miles from Norton in a wooded tract of 240 acres, at an altitude of about 2,200 feet.

A new honor system, somewhat similar to that recently inaugurated at the Joliet prison, is being tried out in the Illinois State Hospital at Kankakee, according to the Kankakee *Democrat*. Parties of five or six of the most trustworthy patients are put to work at different things. Each member of the party is made responsible for his associates, and, should any of them do anything wrong and not be rebuked by his fellows, the whole party is punished in some manner.

A new private hospital has been opened at Platteville, Wis., by Dr. Cunningham, a local physician. It is a concrete structure, 36x92 feet, three stories high, with basement under all. The partitions are fireproof and soundproof, and the floors of tile and concrete. It is said that the interior arrangement shows much careful and skillful planning, and that the equipment is up to date and adequate to the needs of the town. The institution will be known as the Cunningham Hospital.

Work will be started some time this fall on a new home for Hope Hospital, Fort Wayne, Ind. The new building will occupy the site of the present one, but will be erected in sections, so that it will not be necessary to raze the entire old structure at one time and interfere with the work of the hospital. The first section will probably cover an area of 50 by 90 feet and be four stories high. Steel and concrete are to enter largely into the construction of the building, which is to be fire-proof throughout.

There is a movement on foot to establish in Far Rockaway, N. Y., a home for children whose parents are unable to care for them. At a mass meeting held in Far Rockaaway recently, Dr. Sidney Goldstein, a director of Bellevue and other hospitals, told of the necessity of such an institution, asserting that many parents, unable on account of illness or other adversities, to give proper attention to their children, would be greatly relieved to know that the little ones were being cared for. The social service committee of Temple Israel is responsible for the undertaking.

The recent hospital campaign in Akron, Ohio, was a success. One hundred and seventy-five thousand dollars were raised in seven days. Every person subscribing to the fund was issued stock to the amount of his investment. The institution to be established will be known as the People's Hospital. Mr. J. E. Allport, who is the business manager, has been in charge of the Glenville Hospital, of Cleveland, for the last seven years. He proposes to build and operate the People's Hospital on strictly business principles, and is confident that it can be maintained on a self-supporting basis.

An estate valued at nearly $2,000,000 is disposed of largely to a wide range of charity by the will of the late Elizabeth S. Shippen, of Philadelphia, Pa., who died recently. The Pennsylvania Hospital, Philadelphia, and Pottsville (Pa.) Hospital receive $50,000 each; the University of Pennsylvania $25,000 for various purposes, and Bryn Mawr College $10,000 for scholarships. Twenty hospitals, churches, charitable, and other institutions receive $10,000 each, forty-one receive $5,000 each, and fourteen others are given $1,000 to $2,000 each. Various relatives, friends, and servants are given a total of $54,000. The residue of the estate also goes to charity.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Aaministration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. III *August, 1914* No. 2

THE CHICAGO-WINFIELD TUBERCULOSIS SANATORIUM.

Highly Developed Country Home of Rural Beauty Has Been Created Where Patients Can Be Near Their Own Homes and Friends—Rigid Discipline and Routine Living, With Fresh Food, Pure Air, and Rest, Are Other Essentials.

By J. LeROY ANDERSON, M. D., Medical Director.

WINFIELD is located about thirty miles west of Chicago on the Chicago & Northwestern Railroad, amidst the beautiful rolling farm lands of northern Illinois. The institution has a commanding outlook from the top of a hill of the beautiful fertile valley of the Du Page river. The location is ideal, as the fields, woods, valleys, and river all lend their charms to create the rest of both mind and body which is so essential in the treatment of pulmonary tuberculosis.

The institution was made possible through the generosity of Mr. Charles A. Stonehill, who bought the farm and presented it to the Jewish public, with the stipulation that the buildings be remodeled and used for the treatment of tuberculosis. In February, 1908, the remodeling completed, the sanatorium, with a capacity of 23 patients, was formally opened. Since then the history has been one of gradual growth, as the demand for admission by patients has increased yearly. At present there are four cottages and the original building, with a total capacity of 80 patients.

In 1912, owing to the pressing need of providing more room for patients, the board of trustees decided to build a new administration building and wing for private cases. Through the generosity of Mrs. M. L. Rothschild, Mr. Julius Rosenwald, Mr. A. D. Lasker, the Baron Hirsch Women's Club, the Society of Willing Workers, and a great number of others who gave what they could, the trustees were able to carry out their plans. The new building will accommodate 20 private patients, the administrative offices, officers' quarters, library, dining room, kitchen, store rooms, and laboratories.

The new hospital group consists of three buildings, connected by corridors. Reference to the plot plan will make clear the arrangement and shape of these buildings. The administration building, library, and dining room face west, the wing for private patients faces south, the power house and laundry face east. The building is three stories high, and so constructed that every story is completely above ground. This makes every room dry and sanitary, so that they can be utilized for any purpose desired.

Power Plant.—In the power building are the boilers, pumps, refrigerating plant, and laundry. The boilers are of two types—one high-pressure for operating machinery of the laundry, the sterilizer, and the steam cookers in the kitchen; the low-pressure boiler is a Kewanee down-draft smokeless type for heating purposes. The entire heating of the building is by direct radiation. The Van Auken system of vacuum heating is the one installed. Circulation is produced by means of a vacuum pump arranged to withdraw all air and water of condensation from the different units of radiation through a system of vacuum return units, thus making for a noiseless heating system. Each unit of radiation is provided with a Belvac thermofier. In connection with the vacuum pump the building is piped so that a vacuum system of cleaning can be installed at any time. The refrigerating system is of the

Fig. 1. Chicago-Winfield Tuberculosis Sanatorium—Administration building, patients' library, and dining rooms. Patients' wing to right.

ammonia expansion type, which will take care of all the refrigerating and the manufacture of ice. The water supply is from two sources—the cold water from an artesian well, and the hot water is soft and comes from three large reservoirs of 100,000 gallons capacity. Sanitary drinking fountains are located where they will be most use-

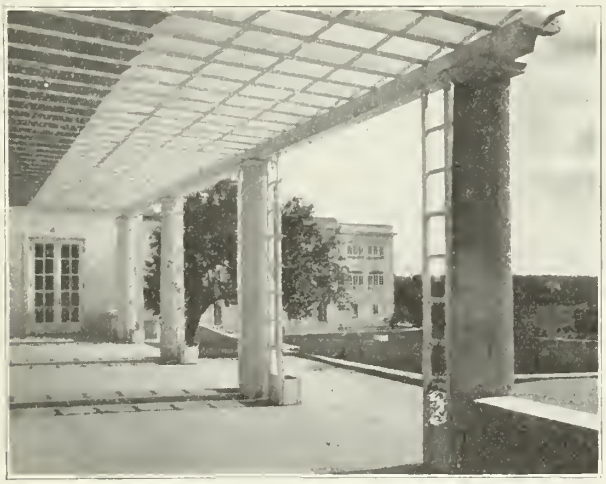


Fig. 2. Chicago-Winfield Tuberculosis Sanatorium — Administration building porch, looking toward patients' wing and out on grounds.

ful. The lighting is by direct illumination supplied by a 110-volt current.

The building is of cement stucco plaster on expanded metal lath. All foundation work is of cement, which has been waterproofed. Window sills and cornice molds are covered with sixteen-ounce copper sheeting. The roofs and dormer windows are of Ludowici-Celledon Company's combination shingle tile, red in color. All copings and ridgeways are capped with salt glazed Akron tile.

INTERIOR OF BUILDING.—All ceilings are 11-foot, and corridors are 6 feet wide. Floors of the administration building and the corridors are of Atlas sanitary composition. The floors of the living rooms and private rooms are of hardwood. The interior finish is of red birch in natural colors. The doors are of the one-panel type, without casings, and set flush with the walls. The windows are of the casement type, and are also without casings. The walls are all hard-oiled and tinted uniformly buff.

All floors, offices, laboratories, kitchen, and power house are connected by an intercommunicating telephone system. The S. H. Couch autophone of the major type is the one installed. In connection with the telephone is a bell signal system for calling the officers. When the signal bell rings in the corridor, the person wanted goes to the nearest telephone and is in communication with the person calling.

The Levinson nurses' silent call system, manufactured by the Chicago Signal Company, is installed in all the patients' private rooms and porches, so that when a patient in his room or on his porch pushes a button, a light shows outside his door and also a colored light in the nurse's

Fig. 3. Chicago-Winfield Tuberculosis Sanatorium—Patients' porches, showing administration rooms under porches.

room and in the corridor, red light indicating the second floor and green light the third floor.

ADMINISTRATION BUILDING.—All floors are above the ground level. On the first floor the following are provided for: central kitchen, cook's pantry, general store room, lavatories for pa-

tients, large play room for children, furniture store room, x-ray laboratories, and dark room.

Second Floor.—Clerk's outside office, telephone switch board, two consultation rooms, nose and throat room, laboratory, office of directress of nurses, medical director's office, patients' library, patients' dining room and serving room. The patients' library is separated from the dining room

Fig. 4. Chicago-Winfield Tuberculosis Sanatorium—Entrance to library and dining rooms.

by folding doors mounted on a track, so that these two rooms can be thrown into one large room if necessary. All the rooms are furnished in early English oak, and the dining room tables are covered with vitrolite tops.

Third Floor.—On this floor are the private quarters of the resident staff, consisting of sitting room and five bed rooms, with attached baths.

Fig. 5. Chicago-Winfield Tuberculosis Sanatorium—Part of the food supply.

PRIVATE PATIENTS' WING—*First Floor.*—This provides twelve rooms for servants, with two bath rooms, servants' dining and sitting rooms.

Second Floor.—On this floor are the nurses' rooms, sitting rooms for nurses, and ten very attractive private rooms for patients, with baths and sleeping-out porches attached. The sleeping-out porches are 12x18 feet, and inclosed by copper netting. Heavy khaki roller curtains are provided for use in case of bad weather.

Third Floor.—This is similar in every respect to the second floor, and likewise provides for ten private rooms.

The grounds surrounding the building are plotted with flower beds and attractive blooming shrubs. To the north of the administration building, and connected by a cement walk, is a park about one and one-half acres in extent for private patients. This piece of woods is in its natural state, but has been fitted up with rustic seats, benches, and swings for the use of patients who are able to be up part of the day. Here the patient can get back to nature and enjoy the life of the wild.

FARM.—The farm of sixty acres provides for fresh vegetables used in the institution and for feed for the cows and chickens. In 1912 the Will-

Fig. 6. Chicago-Winfield Tuberculosis Sanatorium—Living porches. Note lighting and call system.

ing Workers Society built a model dairy barn for the herd of tuberculin-tested Holsteins. The herd supplies the sanatorium with all the milk used. The chickens provide all the fresh eggs and a considerable part of the poultry for the patients' tables.

Winfield is unique in location for the care and cure of consumption near the homes of the sufferers. Methods of treatment of tuberculosis may differ on many points, but on a few fundamentals most of us are in accord. For instance, there is a consensus of opinion that, if the best results are to be attained, patients must be placed in an institution under the strict supervision of a trained resident physician, where they can be subjected to a rigid, if pleasant and agreeable, routine of living, and where they can be taught self-care to an extent not possible in their own homes. Nor is there a difference of opinion as to the value of suggestion and example for this

class of patients; it must be a powerful stimulant to a sick person to see how others in like situation have improved under the medical practice and the routine of the institution, and distasteful doses of rest and food and out-of-door living must lose much of their disagreeableness when they can see the good that is being every day accomplished.

Then, the question of the patient's state of mind is important if he is to obtain the greatest possible measure of good from the treatment. Of course, a patient whose finances will permit can go to the Riviere or to California or to the dry Southwest, but he will be a long way from home, among strangers, and unhappy, fearing that a relapse may occur; he also would be grateful for an opportunity to see his family and friends occasionally, either by paying them a short visit back home, or having them visit him at the institution.

We have gone far enough in the treatment of tuberculosis to know that climate is not the most important factor in treatment, and that a proper routine of living, proper rest, food, and out-of-door air are far more essential; if, with these, the patient can have a mind at ease by reason of his nearness to his family, access to the varied interests of his own community—in short, the life of which he has been a part—it would seem that the best possible results should be obtained.

These are some of the reasons why Winfield should appeal to the well-to-do as well as to those whose financial limitations will not permit them to go far from home; in any event these are the reasons that impelled a fine group of philanthropists to build at Winfield one of the most perfect institutions that money and talent could produce. Here the person of very limited means as well as the person of no means at all, the rich man, woman, and child, can have the best that science, skill, and devotion are able to give, to bring back health and joy of living.

HOSPITAL WORK OF THE LABRADOR MISSION.

Frosted Limbs and Beri-Beri Lie Side by Side in the Far North—Pediculosis and Tuberculosis Thrive Together—Humor and Pathos Among Deep-Sea Fishers—But the Days Are Brightening for the Labrador.

By GEORGE W. CORNER, M. D.,
ASSISTANT IN ANATOMY, JOHNS HOPKINS HOSPITAL.

FROM Harrington Harbor to Cape Chidleigh the coast of North America faces the sea, a thousand miles of cliff and crag, gloriously beautiful in fair weather, but icebound and bitterly lonely in winter. The forest and mineral wealth of Labrador are hardly known and quite untouched, but the codfish that swim in her waters have long been a factor in the world's commerce. Stop the fisheries of Labrador, and you will hear a cry from the poor of Mediterranean lands, who depend on dried fish for a staple food. That is why men remain in a land of hardship, and that is why the world owes these humble fisher-folk the common privileges of mankind—education, help in time of illness, and a fair deal in trade.

Labrador is a strip of land of ill-defined depth, part of which lies along the shore of the Gulf of St. Lawrence, and belongs mostly to Canada. A small portion of the gulf coast and all the Atlantic shore—that is to say, the chief part of the territory—belong not to Canada, but to Newfoundland, the oldest colony of Great Britain. The population of this district is diverse; to the north and inland live a few bands of Indians, who have but slight relations with the white men.

On the northern half of the Labrador coast are six or seven settlements of Eskimo, grouped around mission stations of the Moravians. The history of these brave men forms one of the most brilliant and successful chapters in the entire annals of missionary endeavor. When the missions began work, in 1764, their parishioners, the Eskimo, were called by all who knew them the most savage and ferocious race of America. At present they are perhaps the most peaceable; they actually surpass in education the white population to the south of them; and, whereas the Eskimo tend everywhere else to die out in the face of civilization, in Labrador they have increased in number.

The white people of the coast are of British descent in the main. Some of them are descendants of Devonshire and Somerset men, who settled in the harbors to avoid the long voyage back to England after fishing was over in the autumn; others of them came indirectly by way of Newfoundland. In these isolated spots the dialect of the English home still lingers. As one approaches Canada, the French names become more numerous.

All told, the permanent population of the coast, the "liveyeres," is very small. I have heard it estimated at 2,500. But, as June sunshine and west wind clear the bays of ice, comes a sea caravan of a thousand schooners from Newfoundland, from

Nova Scotia, and even from New England, and hundreds of fishermen and their families by steamer—in all, twenty or thirty thousand people. Of these summer colonists, the schooner men move from place to place seeking a catch; the remainder have their regular home, with a few shacks in which to live, keep the fishing gear and boats, and salt the fish.

Truly these are a hardworking people and deserving of a helping hand; yet twenty-five years ago there was absolutely no medical attention available in the cases of sickness and accident which must inevitably occur in a population of thirty thousand people. It was in the knowledge of this fact that the young physician, Wilfred

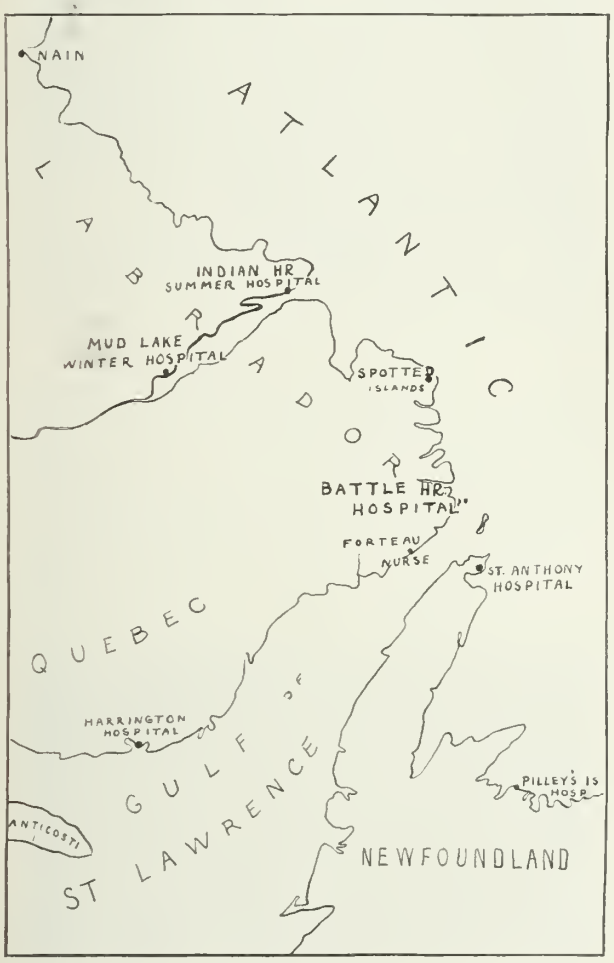


Fig. 1. Map showing location of the Labrador mission.

Grenfell, encouraged by Sir Frederick Treves, set out in 1892 to visit in a small vessel the fishing fleet of Labrador. It would take far too long to recount the growth of the Labrador branch of the Royal National Mission to Deep-Sea Fishermen from this small beginning. Those who like stirring tales are recommended to the books of Dr. Grenfell and Norman Duncan for the story in full. Suffice it to say that the first mission schooner has been succeeded by a steel steamer; there are four cottage hospitals and three small hospitals and nursing stations on shore, and a growing chain of schools, cooperative trading-posts, and centers of industrial work.

Battle Harbor Hospital is situated at a strategic point, that was selected with much foresight. It stands on a little island at the southeastern apex of the coast, just where the gulf enters the sea. Cape Spear, a few miles to the north, is the most easterly point on the North American mainland. Thus every one of the fishing vessels passing to the Labrador for the summer, or southbound for Newfoundland in the fall, must course within sight of Battle Island. I have seen thirty-five sail becalmed off Battle Island at one time. Its own harborage is poor, but Indian Cove, a desolate though safe harbor three miles away, is a favorite shelter for schooners in time of gale, or at night when icebergs are numerous, and is in easy reach of the hospital by land.

About this barren islet, and on its neighboring isles and mainland, since the time of Cartwright the explorer, whose trading-post was nearby, a number of villages have grown up, so that the population within five miles is perhaps 500 in summer. Beside the local residents and the schooner men, the parish of the hospital is increased by the fact that Battle Harbor is the terminal port for three of the mail steamers which visit the Labrador, and a port of call for two others, making altogether nine stops each fortnight from June 15 to December.

Admissions to the hospital are in various ways. The young men of the staff often sleep half clad, with boots by the bedside, in expectation of a midnight blast announcing the arrival of a steamer. A patient may be dragged in on a sailcloth stretcher by his despondent schoonermates. A woman was brought twenty miles in the open Atlantic, lying helpless on her back in the bottom of a rowboat in a chilling, heavy rain. The mission steamer Strathcona brings a few patients from the remote unvisited harbors, but the mailships are the bearers of the majority of those seeking medical attention, either as they come of their own accord, or are sent by the Government physician who travels on one of the ships.

The hospital building has grown from a small house which was given to Dr. Grenfell twenty years ago by Baine, Grieve & Co., a St. John's house, who have for generations had a trading-post on Battle Island. Additions have been made, with such means as have been available and by such amateur architects as were at hand, until the establishment is now a simple but neat hospital of 20 beds. There are wards for men and women, respectively; an inside room of three beds suitable for ether recovery, for ophthalmic cases, and the like; two verandas for open-air patients;

a small operating room; a tiny place for infected dressings and miscellaneous examinations, and a room, now overcrowded by being used as drug room, dispensary, and clinical laboratory.

The building also contains a large and convenient kitchen and pantry, a sitting room for patients, and a hall about 20x30 feet, which served last summer by turns as a dormitory, unpacking room, lecture hall, dental operating room, loom room, and chapel. The staff makes the best of a

Fig. 2. Battle Harbor Hospital.

few rather small sleeping rooms, with small dining room and sitting room. Beside the hospital, the mission group also contains two store houses, a wharf, and a small laundry, called so by courtesy. The fleet at Battle Harbor contains a small auxiliary schooner, a launch, a barge, and a skiff for harbor use.

The presiding genius of this establishment from 1906 to 1912 was Dr. John Grieve, known to all the coast in his manifold capacities as physician, magistrate, and traveler. Thanks to his Scottish pluck and endurance, and the skill of his loyal dog-drivers (the Murphys of Battle Harbor, father and sons), Dr. Grieve has become one of the most extensive sledge travelers in the country. Some of his trips have included practically every house from Forteau to Nain, a round trip of fifteen hundred miles. Could he be induced to give here a description of his winter work, or could I give it for him, there would be a tale of Labrador far different from my unexciting account of peaceful summer duties.

But Gaelic reticence has withheld from me everything, except such bare statements as that in an Eskimo hut at Okkak in such a winter he did an interesting major amputation without assistance, or that crossing such and such a bay the sledges broke through weak ice and all got wet, the thermometer registering 40 below, or that once they had a little excitement due to an unlucky combination of blizzard and wolves. Dr. Grieve is now at Harrington Hospital. His worthy successor at Battle Harbor is Arthur Wakefield, M. D., F. R. C. S., who is a veteran of the Boer War, and, as he was formerly field officer of the Newfoundland Association for the Prevention of Consumption, he is also a veteran of many cruises among the fishermen.

About the middle of June the little town begins to rouse from its winter quiet. The doctor has returned from his dog-sledge trip in March, and since the first of May has been cooped up on the island by the weakness of the ice, which prevents all travel to and from the seaward isles. But with the first steamer which pokes her nose through the remains of the ick-pack come the summer helpers who are to take their part in the season's work. The most important of these newcomers is naturally the head nurse, who is either a volunteer, qualified by several seasons' experience with the mission for the peculiar difficulties of her position, or, as was the case last year, one of the very few paid nurses of the staff—that is to say, she receives a stipend called a salary by courtesy. This lady would be indignant should I sing her praises by name in this place, but I may at least say that "Sister" C., as she is affectionately called, English fashion, has won from colleague and patient all the praise which the poet ascribed to that other "lady with a lamp," not lessened by the fact that her lamp is a seaman's lantern, her land a barren isle.

Some summers there is a regular housekeeper; otherwise the head nurse has this duty also. The

Fig. 3. Mission ship "Strathcona."

housekeeper has the task of training six or seven Labrador girls in the service of kitchen and wards. If she is lucky, two or three of the maids in any one year will have been at the hospital before, and thus have some little experience in housework above that of their own primitive homes. The kitchen, therefore, becomes a training school, for the girls are brought to the mission not only for the good of the work, but in the knowledge that when they return to their homes they will be mis-

sionaries in turn, taking to remote villages new ideas of cooking, household management, and hygiene.

The housekeeper must feed forty people, the sick and the well, on a diet every article of which, except fresh fish and berries, has to come in tin can or barrel by vessel. She must concoct a milk-and-egg diet, when ordered, from tinned milk and egg-powder; and she has to feed invalids who are deeply suspicious of custards, broths, and such unfamiliar things, and who complain if they are not given salt pork and sinkers.

Fig. 4. A patient at Battle Harbor.

Of late years the increasing work of the hospital has required three other nurses, and these are volunteers, who have only their expenses paid. They have come, in different seasons, from a number of the English training schools, from Massachusetts General, St. Luke's, Presbyterian (New York), from Johns Hopkins, the Sick Children's Hospital of Toronto, Sibley in Washington, and many others. The physician in charge has for assistants a recent graduate and one or two medical students, who pay their own traveling expenses in return for the instructive summer's experience. Usually three or four college students volunteer for the summer's work about the boats and in the general work of the station.

The medical work, of course, does not differ greatly from that of a small village hospital and dispensary in the United States, and yet there are special conditions which add immensely to the burdens, and, one might add, to the interest of the situation. First, the widespread occurrence and disastrous results of tuberculosis. In the absence of statistics it has been estimated that one death in three in Newfoundland and Labrador is caused by this disease, besides those in which an intercurrent infection carries off a tuberculous patient. The blame for this condition can fortunately be definitely traced. Spitting is the national sport of the fishermen, both indoors and out; and, when practiced by an infected man, in a tight, overheated, one-room shack, among a family of underfed children, the result may be imagined. A lad was admitted to Battle, and died the next day, whose sputum showed at least five hundred tubercle bacilli in every field of the sample taken for study. He had been lying for seven months in a room also occupied by six brothers and sisters, and had never in his life been told that it is wrong to spit on the floor.

The campaign against tuberculosis has been taken up by the leading men of St. John's, who have put money and enthusiasm into the fight. Dr. Arthur Wakefield, now in charge of Battle Harbor, toured the island for several seasons, preaching in every port from one text, "Open your windows and don't spit." There is now on foot a plan for the gift to the colony of a chain of sanatoriums by the Reid Newfoundland Railway Company. Of course, the problem is tangled up with the questions of food and housing, as it is everywhere, but on the whole things seem hopeful. The Labrador or Newfoundland fisherman who has tuberculosis is much better off, if he can get good advice and will follow it, than the inhabitants of East Side tenements or the alley-dwelling negroes of our southern cities.

Strangely enough, another serious disease of this northern country is one that everyone thinks of as distinctly tropical—namely, beri-beri, or

Fig. 5. A little patient at Battle Harbor.

endemic peripheral neuritis. About 12 percent of admissions at Battle Harbor are cases of this disease. In etiology the northern cases agree with the experience of tropical physicians, who attribute the disease to a diet formed chiefly of polished rice, the husks, which are discarded in the process of polishing, containing a substance necessary to prevent neuritic degeneration. In the North the winter diet consists largely, sometimes entirely, of tea and bleached white flour. This diet lacks the same substance which is wanting in polished rice, and which seems to be present in the

rice and wheat husks, in fresh meat, and in many vegetables. A fairly well-off family in the Straits of Belle Isle failed to get their winter supplies, owing to an early freeze-up, and had to subsist through the dead of winter on a few barrels of flour and a little tea; they had absolutely nothing else, not even sugar. At the end of February four of them were attacked by the paralysis of beriberi. In March they got some fresh game, and immediately began to improve, but one of the boys will not walk again.

In the spring of 1913 an epidemic of pneumonia invaded many harbors, with an unusual number of fatalities. The other common respiratory ailments are frequent, notably enlarged tonsils and adenoids. Scurvy, of course, and all the forms of diseases due to malnutrition are ever occurring. The vexing and yet hopeful side of this matter is that in most cases the faulty diet is not due to forced starvation, but to ignorance of the people as to how to lay out their resources for proper food. Accidental lesions and wound infections send many of the fishermen to the mission dispensaries; violent pyogenic infections of cuts caused by fishing tackle are frequently seen.

Fig. 6. Spotted Island Station, in construction.

Inflammations of the conjunctiva and other parts of the ocular apparatus give occasion for much ophthalmic practice. Pterygia are very common, as is to be expected from the weather conditions. Skin diseases, especially eczemas, cause much suffering among the fishermen aboard schooners, where it is next to impossible to keep clean. Scabies is prevalent, and pediculosis is the bane of the nursing staff—it is found in every ward patient. The mission doctors do no obstetrical work, except when called in complicated cases; not from unwillingness, but because of the enforced slowness of travel, and because the patients favor local help, and will not send for the physician. Native treatment, needless to say, is of the most ignorant old-wife type; the late results of obstetric neglect are common and serious.

The venereal diseases are practically unknown at Battle Harbor—*O fortunati nimium*—in six hundred dispensary patients there were four cases; none of them were acquired in Labrador. A package of salvarsan lies unopened on the shelf. Yet the prevalence of arteriosclerotic lesions is distressing, a fact to be blamed on the constant exposure and dreadfully hard work of the fishermen. A man told me that the nets belonging to his crew were set in a place three miles away from his schooner. He and his mates had pulled their heavy boat the six miles three times a day, in gale and calm, all summer long. Let the reader try a few minutes at a fifteen-foot sweep, in a heavy sea, and he will appreciate what hard labor really is.

I conclude this dismal catalogue with mention of a minor ailment which is so nearly universal that the mission has printed the following circular and distributes it by the hundred:

ISSUED BY THE R. N. M. D. S. F. AND THE ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

Have you a sore stomach? wind on the stomach? a bad head? costive bowels?

If so the trouble is probably due to eating too fast, and not biting your food; drinking your tea too strong and drinking your tea too hot.

You can probably cure yourself without medicine by remembering:

1. That the more you bite your food the better can your stomach digest it.

2. That hot water shrinks up sealskin. Your stomach is much more delicate than sealskin. Therefore, put the cup of tea to your lip. If the tea is too hot for your lip, it is much too hot for your stomach.

3. Strong tea, or stewed tea, contains much tannin. Tannin is used for tanning leather. Do you want to tan your stomach? If not, take your tea weak and freshly made.

4. The bowels should act every day. The best way to make sure of this is to sip half a pint of warm water, or more if necessary, every morning half an hour before eating anything.

Those of us who go to the Labrador fresh from metropolitan hospitals are surprised and not a little instructed to learn how much can be done with the small equipment of a mission station. A critical visitor to Battle Harbor will find neat histories of every case, recording complete blood counts, gastric analyses, and even in a few instances pathological reports, made on the basis of free-hand razor-blade sections. Autopsies are made in a little shed which serves between times as a dynamite store house. St. Anthony Hospital rejoices in a microtome and a bacteriological incubator.

At Battle the house officer finds time to make the routine physical examinations in spite of numerous other duties, being, as the mission magazine says, "house surgeon, house painter, and stevedore." It is no unusual thing for the staff to be called from "public hygiene" work, in the shape of drain digging, to undertake major operating.

The little operating room, which the British members of the household insist on calling the "theater," sees the same moments of excitement, is filled with the same spirit of mutual dependence and mutual confidence that are known in marble amphitheaters at home.

I cannot say much about the nursing work of the mission. I hope that Dr. Hornsby may sometime induce one of the nurses to write an account of this side of the problem. The successful makeshifts and scorn of hardship which make the medical work a joy to patient and physician, the faithful and patient service, the lonely, cold night watches, the cheering visits of nurses to distant homes, would make a tale worth telling. In the winter of 1912-13 a party—doctor, nurse, and driver—set out from St. Anthony for a round of the northern end of Newfoundland. Many days from home, the physician came down with pneumonia. The nurse treated him in a native house, pulled him through, and then the party set out again and completed the trip. One of the mission nurses, Sister Florence Bailey, of the Victorian Order, has been stationed alone at the little town of Forteau for seven years, teaching school and attending the sick, even driving her own dog team on winter visits.

The fisher-folk of northern Newfoundland and of Labrador, viewed as hospital patients, are admirable in some ways, highly annoying in others. The deeply pious nature of the people takes outward effect in a spirit of listless dependence on Providence, so that necessary treatment is postponed, or operations declined, in spite of every argument and threat. A man brought in with a fractured hip proved to have had chronic gastritis for eight years, with vomiting after each meal for the past two years. The patient said that he had never bothered to see a doctor, and, moreover, that as he had stood his ailment so long, he would rather continue vomiting than be put on a milk diet. A woman 62 years of age appeared at the dispensary suffering with an ovarian cyst, which after removal weighed twenty-eight pounds. She and her family greatly feared operation, but finally gave permission. During her convalescence her husband came to visit her, and on leaving remarked to Dr. Wakefield, "Well, Doctor, so ye've come through with this terrible thing. Who'd a thought it? But, then, all things is possible with the Lord. And now, Doctor, since ye've done so well by me wife, I just think I'll let ye test me eyes." Yet, when the occasion demands, the Labrador can show its examples of bravery.

Tradition and superstition are held with tenacity, oftentimes blocking the efforts which are being made to teach the prevention of common ailments. I have already referred to the prejudice against dark flour; this seems to have arisen in days when darkness meant dirt, but at present it causes useless expense for bleached flour and aids the spread of beri-beri. Another tradition is that of the danger of fresh air in the house. Hospital patients think it a crime to let the cold air on them, even when protected by five or six blankets. To make a tubercular patient sleep out-of-doors is the refinement of torture. Still, twenty years' preaching of these reforms is not without result, and whole wheat flour, the open window, and even that amazing novelty, the tooth brush, are beginning to invade the villages of Labrador.

Alas, alas, the patent medicine faker finds among these simple people an easy field for his trade. One audacious firm even sent a case of its cure-all liniment as a contribution to the mission. The people are invariably surprised if told that medicines are not necessary or are inadvisable for their complaints, and leave unsatisfied if not given pills and potions. Large doses of bitter drugs are preferred, and will be faithfully taken with much satisfaction on the part of the patient.

It is always amusing to see with what naive surprise certain things are regarded which are very familiar to us; for instance, the clinical thermometer, which is thought by many to be a kind of medicine. The bath tub is the greatest novelty. Battle Harbor possesses three of these, the only ones in Labrador, if I am not mistaken. "Doctor," said one of the patients, "has I got to strip off me clo'es and git into that thing? You folks is shockin' hard on us pore sailors." Of course the art of bathing has to be taught and its performance supervised. How often would you bathe if in winter you had to melt every drop of the water from snow, and in summer the water about your schooner was at a temperature of 38° or 40° Fahrenheit?

I can speak of the other situations only in a general way. St. Anthony Hospital in northern Newfoundland is the largest of all. It is so situated that it can be kept open all the year round. In 1912 there were 368 in-patients and 2,400 dispensary visits. The dentist, a volunteer helper from Boston, Dr. S. P. Mallet, saw 304 patients during his stay of less than a month. The hospitals at Indian Harbor, Harrington, Pilley's Island, and the lonely nurse's station at Forteau are all busy in their respective fields. Through the gift of the students of the College of Physicians and Surgeons of Columbia University a new station has been opened at Spotted Islands. Dr. J. S. Wiltsie, of New York, has been for two summers not only the entire nursing and medical staff of this hospital, with one layman as assistant, but the architect of the edifice, and teacher and clergyman to the community. I have taken the lib-

erty of borrowing a few paragraphs from Dr. Wiltsie's report, and must add what one of his patients told me, that when their friend took ship for home at the end of the summer he describes here, the plain fishermen of the parish wept at the parting.

"We spent several days unpacking before selecting the spot for our new combination school, dispensary, and chapel, the material for which we had brought with us by "Invermore" from St. John's. Then we called upon the men to turn out and help us put it up. As the fish had not yet "struck in," there was not much else for the men to do, and, as everybody was interested, we had all the help we could possibly make use of. This is the spirit that the men showed all summer long in their attitude toward the work, and the best of it all is that it was free labor. This was understood from the previous year—that if we would furnish the materials the men would do the rest. Now they have a very pretty little edifice of which they are very proud.

"As this building was growing day by day during the summer, Mr. Brown and I were carrying on the teaching, medical work, and religious services in the house we had rented for the summer. The dispensary justified its existence from the beginning. It did not take people long to learn that it was there, as nearly every day brought us patients from neighboring harbors over a radius of twenty miles and more. Of course we did the usual distribution of clothing and literature in return for services and articles of native handiwork. We established a library, which proved a great success. We gave health lectures on tuberculosis, beri-beri, and general hygiene. We established a food fund, to be drawn on this winter because of destitution resulting from the failure of the fish. We succeeded in finding work for half a dozen families for the winter, and through the kindness of Dr. Grenfell, who aided us in some of the above undertakings, we were able to supply traps for most of the men for use this winter.

"The club for the men merits a little attention, as it proved a great factor in keeping up their spirits when they had every reason to be depressed. Every night we opened the house for the men. A combination game board was the chief attraction. It scarcely saw an idle moment from one end of the summer to the other. Besides this there were many other games, books and magazines, the phonograph, and several other musical instruments. The men were allowed perfect freedom except for a few simple rules regarding spitting and muddy feet, and I am glad to say these rules were very well kept. There were never less than twenty men present in an evening, and more often thirty or forty."

In this short paper I have left untouched many of the activities of the Labrador mission which do not come under the head of medical work, yet undoubtedly the cure for much of the suffering of Labrador is to be found in other things—the schools and the cooperative stores, which, by freeing the land from ignorance and debt, bring nearer the day when Labrador shall gain her hard-earned prosperity.

The Sisters of the Poor of St. Francis are planning the erection of a nurses' home for St. Mary's Hospital at Quincy, Ill. About $30,000 will be expended on the building.

CANADIAN NURSING SOCIETIES MEET.

Miss MacKenzie's Contention That Training Schools Are Ruining Young Women Precipitates Warm Discussion—Fine Program and Large Attendance.

The Canadian Society of Superintendents of Training Schools and the Canadian Association of Trained Nurses held a joint convention in Halifax, July 8 to 12. It was a most successful meeting, delegates being present from every hospital center from the Atlantic to the Pacific, with four representatives from Vancouver alone.

In her presidential address, Miss Violet Kirke, president, reviewed the brief history of the society from its organization four years ago, and found that great progress had been made in the welding together of independent training schools into a fine, working body.

Papers were read on many phases of nursing, that by Miss Margaret Ard MacKenzie, president of the Victorian Nurses, calling forth animated discussion by members who did not agree with the speaker that three years of training in the schools of today was ruining young women. She said:

"Dozens of bright, promising women filled with the missionary spirit, eager to do something to help some one to be better, happier, and healthier, who have entered on a training in the various so-called schools, issue forth from these institutions warped, narrow, mercenary, and blase—all their ideals gone, and, in almost every case, gone beyond recall. To be very conservative, nine-tenths of the students who enter our nurse training schools come out after three years changed for the worse."

Continuing her denunciation, which created astonishment among the audience, Miss MacKenzie said: "Glance at the hours, glance at the drudgery, glance at the impossibility of keeping up with the ordinary means of culture, church, theater, lectures, music, art, mingling with different kinds of people and exchanging ideas on literature, art, or science. How many nurses keep up their church life, keep up with any studies, even with their nursing studies, keep informed as to current events, how many keep up their correspondence with old and valued friends even? Very few, indeed. So on the most important side—the development of character—our nurse training schools are a woeful failure. For all these years our women who have desired to be equipped for their life work have been exploited so as to keep down expenses, and many a woman on leaving her school has felt herself cheated, deceived; she has asked for bread and received a stone."

A number of those present spoke against Miss MacKenzie's contention, among them Miss Helen Randal and Miss Gunn, of the Toronto General Hospital, neither of whom believed that any such results were attending present-day training methods, and, while the training was not all that it should be, perhaps, it certainly was improving all the time, and working along sane and productive lines.

Papers were read by Miss Edgar, of Toronto; Miss E. R. Scovil, of Gagetown, one of the nursing pioneers of Canada; Miss Bailey, of Forteau, Labrador, "the Angel of the Frozen Trails," as the natives call her; Miss Neelin, of Kincardine Hospital; Miss Strumm, Montreal General Hospital; Miss Catton, Lady Stanley Institute; Miss Manby, of the Muller Institute for Physical Culture, Montreal; Miss Southcott, St. Johns, Newfoundland; and Miss Burkholder, of the Good Samaritan Hospital, Dawson City.

The erection of a $50,000 hospital will soon be begun at Redfield, S. D.

THE NEW HOSPITAL OF THE HOUSE OF CALVARY.

An Institution for the Treatment of Sufferers From Cancer, Where, Although in Every Respect a Modern Hospital, It Has Been Sought to Create the Atmosphere of a Home.

By ROBERT J. REILEY, Architect.

HAVING outgrown the building which it has for many years occupied on Perry street, New York city, the House of Calvary has recently completed arrangements for the erection of a new home and hospital in a less congested section of the city, which it is proposed to construct so as to embody the most modern ideas in scientific hospital construction.

The institution, which is in charge of Catholic sisters of the Dominican order, and is supported by voluntary contributions, is devoted to the treatment of persons suffering from cancer. It is essentially a hospital, devoting its activities to the care of those afflicted with the disease rather than to research as to its causes and cure, and in its treatment pursues the methods which those in charge of the laboratories especially devoted to the study of cancer have found to be beneficial.

The new site, which has been selected with regard to the importance of light and air on every side and the convenience of its location with respect to existing lines of transportation, is located at One Hundred and Seventy-sixth street and Mount Hope avenue, Borough of the Bronx, New York city, in a quiet neighborhood and on elevated ground.

The building will be of colonial architecture, with walls of red brick and white marble, and has been planned in accordance with the pavilion type of design, with the approach from the south.

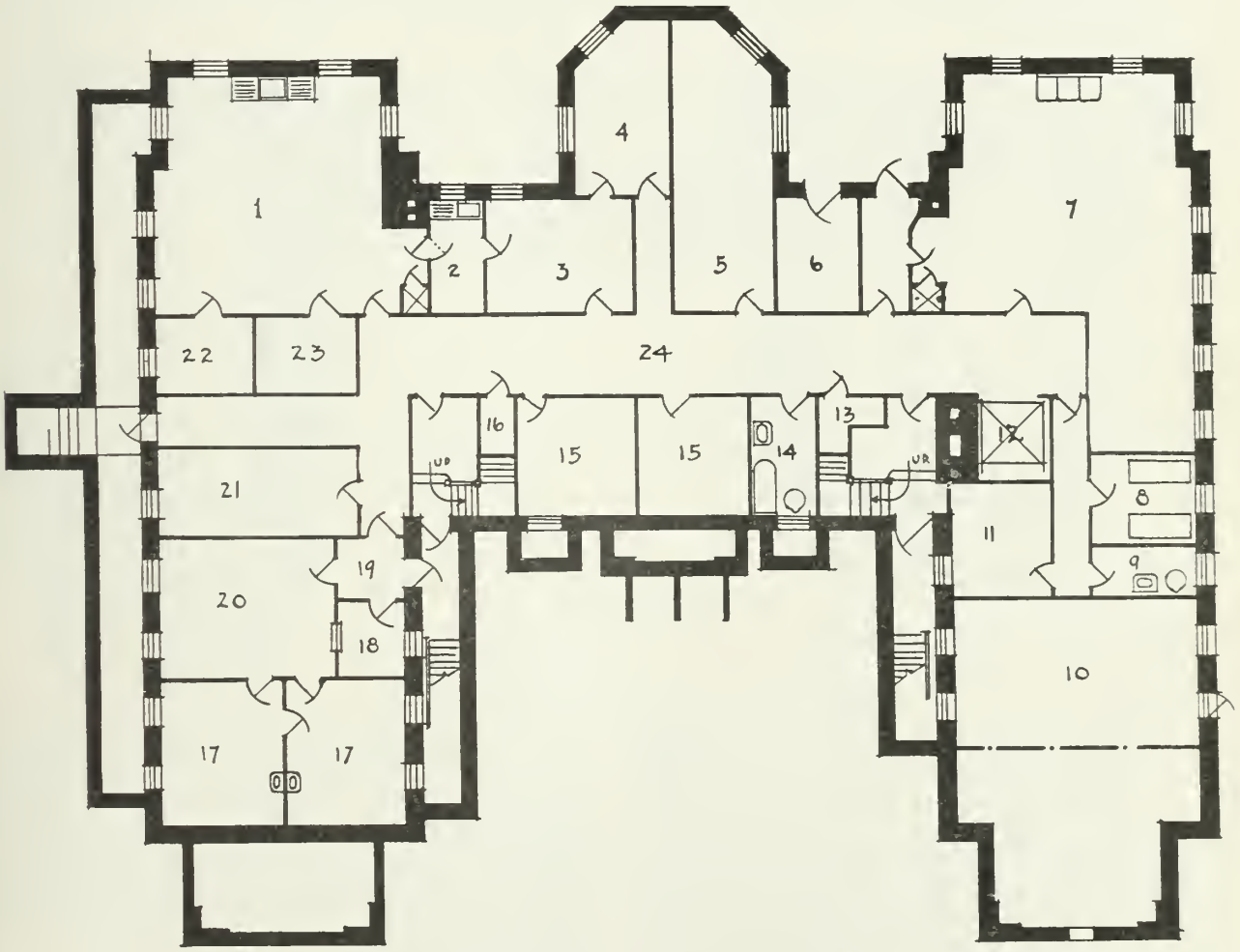


Fig. 1. House of Calvary Hospital—Basement floor plan.

1. Kitchen.
2. Pantry.
3. Nurses' dining room.
4. Sisters' dining room.
5. Dormitory for women employees.
6. Morgue.
7. Laundry.
8. Men employees' room.
9. Toilet.
10. Boiler room.
11. Elevator machine room.
12. Elevator.
13. Vacuum cleaner room.
14. Bath and w. c.
15. Storage rooms.
16. Closet.
17. Doctors' offices.
18. Drugs.
19. Vestibule.
20. Reception room for clinic.
21. Dining room for employees.
22. Cooling room.
23. Kitchen supplies.
24. Corridor.

The pavilions run north and south, thus insuring both morning and afternoon sun in the wards on every floor, and at the south end of each pavilion is a roomy solarium on each floor for the patients occupying that ward, while similarly located at the north end of each floor is an open balcony intended primarily for use in summer, when the solarium might be uncomfortably warm.

The construction throughout will be of fire-proof materials, with columns, floor beams, and girders of steel, floor construction of concrete, and partitions of terra-cotta blocks. While modern building construction has largely eliminated the danger from fire, too great stress cannot be laid on the danger from smoke. A fire may originate in the contents of a building, and, without communicating to the structure itself, generate sufficient smoke to fill the building completely, causing in some cases suffocation and not infrequently a serious and sometimes fatal panic among the occupants.

With a view to eliminating as far as possible the smoke peril, special attention has been given to the subdivision of the building and the prevention of the means of exit from becoming filled with smoke. There will be two interior stairways in the building, one placed near each pavilion. Each stairway will be entirely inclosed by a fire-proof partition, and have a door at about the grade of the street opening directly to the outer air. This eliminates the danger of the stairwells becoming filled with smoke, and permits a person having once entered the smoke-proof stairwell to pass downstairs and out of the building without reentering any of the corridors. There will also be two outside staircases leading from the balconies on the rear of the building and carried down to the ground. The elevator shaft will likewise be inclosed by fire-proof material on all floors. As a result of this plan, each floor will be entirely shut off from the other floors, affording perfect isolation.

Special attention has also been given to matter of flooring, an important item in hospital construction. It has been decided that the finished flooring of the parlors and the rooms occupied by

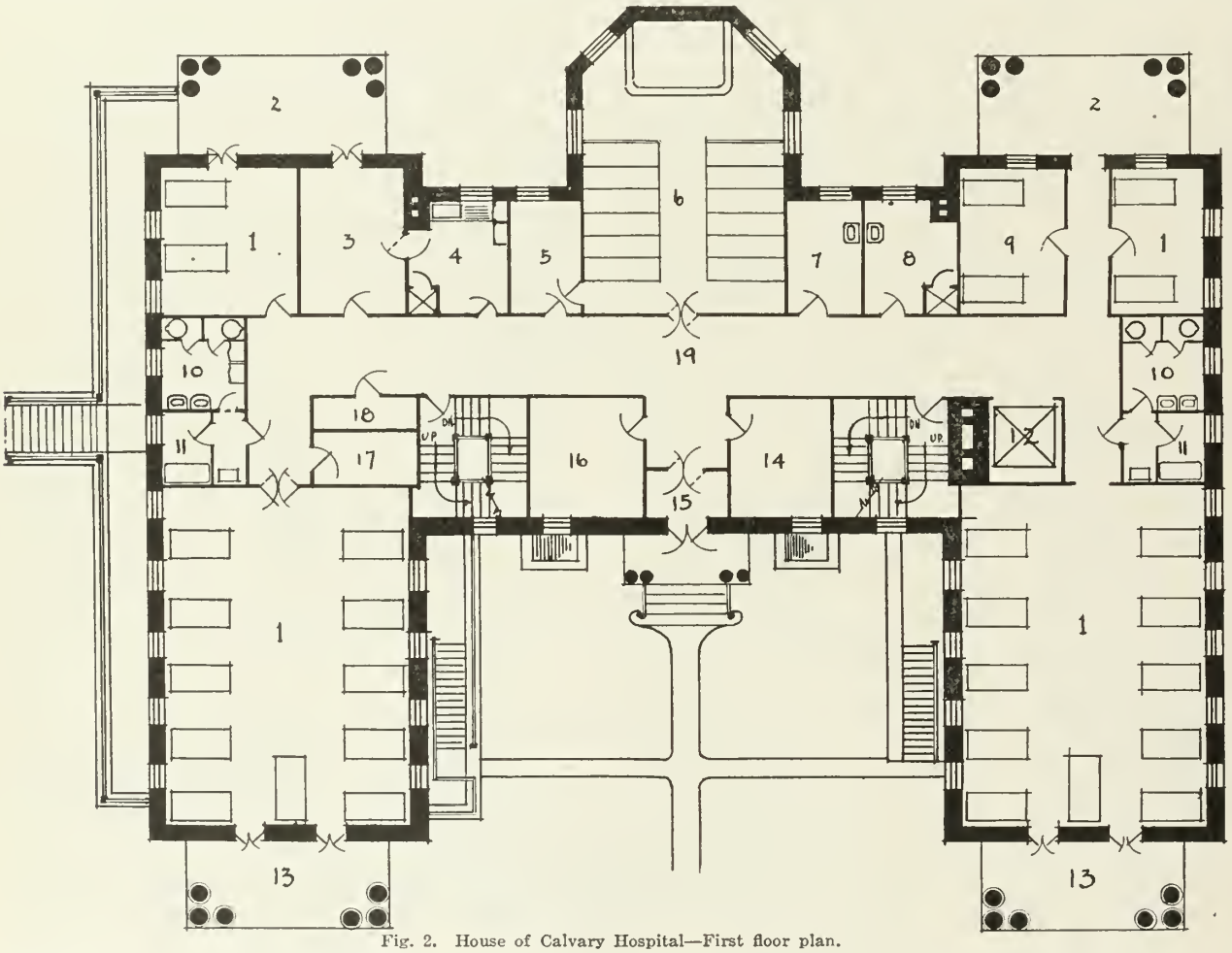


Fig. 2. House of Calvary Hospital—First floor plan.

1. Wards.
2. Porch.
3. Dining room.
4. Pantry.
5. Sacristy.
6. Chapel.
7. Pharmacy.
8. Dressings.
9. Men nurses' room.
10. Toilet.
11. Bath.
12. Elevator.
13. Sun parlor.
14. Office.
15. Vestibule.
16. Reception room.
17. Supplies.
18. Linen closet.
19. Corridor.

the nurses and sisters will be of wood, while that of the operating, sterilizing, and etherizing rooms and of the toilets will be of tile. In the wards and corridors linoleum cemented to the concrete underflooring, with an interlining of felt, will be used, and in the service portion of the building the floor will be of cement specially treated to prevent dusting.

The building will be heated by hot water, and, in place of the elaborate systems of artificial ventilation frequently installed and so often found to be impractical in actual operation, will be ventilated by natural direct ventilation. Artificial ventilation will be used only in the corridors and such portions of the building as do not receive good natural ventilation. In the wards the windows will be placed on opposite sides, and, with a view to overcoming one of the difficulties encountered in natural ventilation, each will have a transom hinged at the bottom so as to swing in at the top, thus permitting ventilation and at the same time preventing a draft on the patients. In order to provide a means of rapidly heating the operating room, especially at such times of the year as the general heating plant might not be in operation, an auxiliary steam heating system has been installed. This auxiliary system will also furnish steam for use in the laundry and the sterilizing rooms.

The building will be fitted with the latest devices in fixed hospital equipment; an incinerator in each of the rooms devoted to the changing of dressings, which are placed near each ward, vacuum cleaning plant, and similar devices, omitting only those which have proved inefficient under actual working conditions. By each bed will be a push button controlling a colored light placed in the corridor as a nurses' signal. The light may be extinguished only by the nurse going to the bedside.

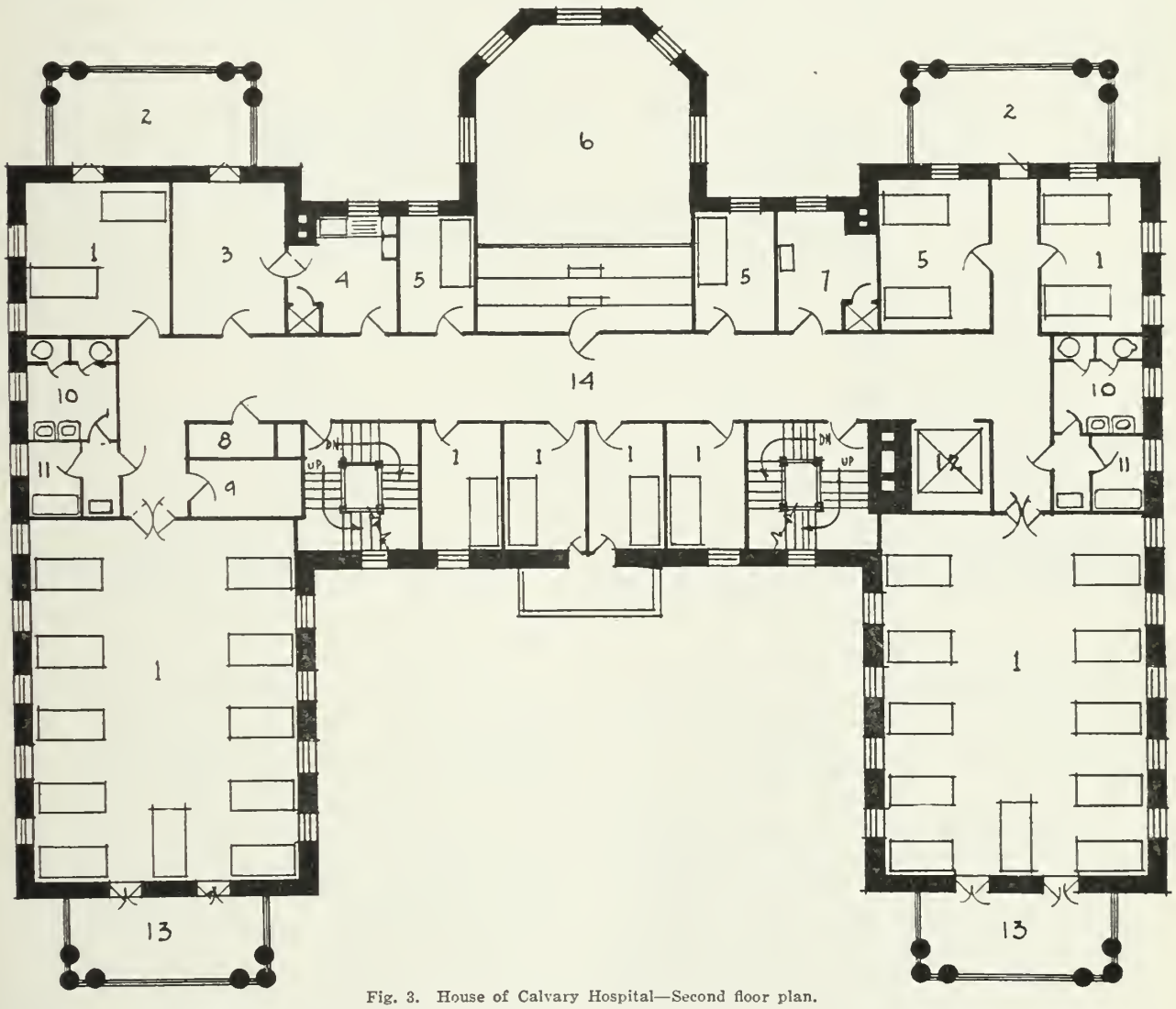


Fig. 3. House of Calvary Hospital—Second floor plan.

1. Wards.
2. Porch.
3. Dining room.
4. Pantry.
5. Private rooms.
6. Upper part of chapel.
7. Dressings.
8. Closet.
9. Supplies.
10. Toilets.
11. Bath.
12. Elevator.
13. Sun parlors.
14. Corridor.

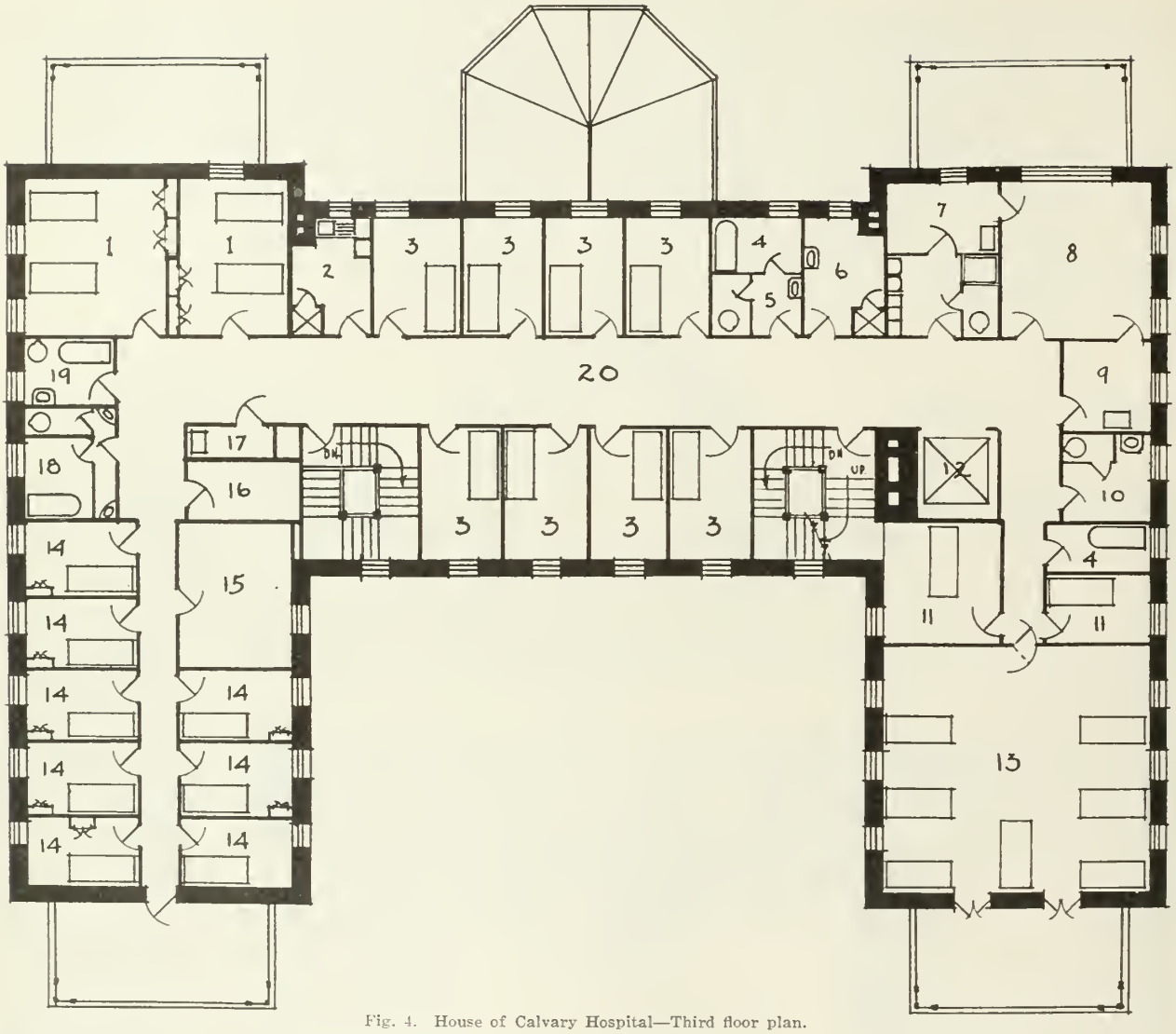


Fig. 4. House of Calvary Hospital—Third floor plan.

1. Nurses' rooms.
2. Pantry.
3. Private rooms.
4. Bath rooms.
5. W. c.
6. Room for dressings.
7. Sterilizing room.
8. Operating room.
9. Etherizing room.
10. Toilet room.
11. Single rooms.
12. Elevator.
13. Surgical room.
14. Sisters' rooms.
15. Community room.
16. Store room.
17. Sink closet.
18. Sisters' bath room.
19. Nurses' bath room.
20. Corridor.

Although a hospital, an effort has been made to create an atmosphere of the home about the building. It was with this idea in mind that the colonial style of architecture was chosen, as it probably expresses American home life better than any other. For the same reason, while every precaution has been taken to avoid places for the lodgment of dust and every provision has been made for easy cleaning, the white enamel interior so repellant to patients entering many of our hospitals will be avoided, and light tints of colors more restful to the eye will be substituted in its place. This departure, it is hoped, will tend to contribute to the contentment of the sufferers under treatment in the institution.

The Board of Public Works of Kansas City, Mo., has awarded contracts for the construction of a tuberculosis hospital, consisting of a two-story main building and two cottages.

Free Health "Movies" in New York.

The Department of Health of New York has begun its free moving picture exhibitions in the parks and on the recreation piers of that city. According to the arrangements, as published in the department's bulletin of July 4, twenty such shows will be given—ten in Manhattan, two in the Bronx, six in Brooklyn, and one each in Long Island City and Flushing. In the Manhattan and Bronx exhibitions the department is assisted by the Tuberculosis Committee of the Charity Organization Society, and in the Brooklyn and Queens exhibitions by the Tuberculosis Committee of the Brooklyn Bureau of Charities.

Each exhibition consists of four reels of films—The Story of a Consumptive, The Production and Handling of Milk, The City Beautiful, and The Little Cripple. Between the films a large number of instructive lantern slides are shown, and thousands of antituberculosis leaflets are distributed.

The bulletin publishes a full schedule of the times and places for the exhibitions for the month of July.

A new annex to St. Joseph's Hospital at Elmira, N. Y., was recently opened.

WARD WASTE AND WHAT IS DONE WITH IT.[1]

Gauze and Dressings Are Washed for Reuse—Worn-Out Material Picked for Pads—Left-Over Food Is Carefully Inspected for Lost Articles and Unnecessary Waste—One Central Incinerator Preferred—Salvage in Rubber Gloves.

By KARL H. VAN NORMAN,
ASSISTANT SUPERINTENDENT JOHNS HOPKINS HOSPITAL.

WARD waste to be considered here is of two kinds—surgical supplies (gauze, bandages, and rubber goods) and food.

A. SURGICAL SUPPLY WASTE.

(a) GAUZE.—All gauze dressings after use are washed. Each ward collects its used dressings daily and sends them to a central collecting room, where the gauze is carefully picked over and safety pins, pieces of tissue, etc., are removed. The workers doing this wear rubber gloves. The gauze is sorted into piles of large and small pieces, and is placed in open mesh bags made of cord. The bags are only half filled, and the gauze remains in these bags throughout the process. The bags are then sent to the laundry, and the gauze is washed as follows:

1. Soaked over night in cold water, changing the water several times.
2. Transferred to the sterilizing washing machine. The machine is partly filled with cold water and the gauze is washed well. Then steam under twenty pounds pressure is turned in for thirty minutes, sterilizing the contents. The water is then run off.
3. Washed with warm water, soap, and sal soda.
4. Rinsed in hot water.
5. Rinsed twice in cold water.
6. Wrung out by putting through the extractor.
7. Dried in drying machine.

The bags are now transferred to the surgical supply room, where the gauze is sorted, all which is to be used over being put in a pile and that which cannot be used for dressings placed in large paper bags, to be sent later to the cotton picking machine. Each piece of gauze to be used again is now stretched and trimmed, and all the pieces are placed in piles according to size. From this gauze the different dressings are made.

All the small pieces of gauze are made into sponges, which are used only once and then destroyed.

Gauze is washed and rewashed as long as it can be used as gauze. The average number of washings is four, and tests have shown that the greatest number of times it can be washed is six—i. e., it was used as gauze seven times.

The cotton picking machine transforms the old, worn-out gauze into soft, fluffy cotton, which is later used for cotton pads for drainage cases, such as gallbladder and genitourinary conditions, and also used for top filling in delivery pads. It can be used in any dressing where a long fiber cotton is not necessary.

Picked cotton is not used more than once, except in the case of the delivery pads. Here it can be washed and used many times. Eventually it all goes to the incinerator.

The cotton picker is operated by one of the men in the baggage room in his spare time. It is run usually for an hour early in the morning and late in the afternoon, two or three days a week, and in this amount of time all the gauze sent down can be picked.

(b) BANDAGES.—All soiled bandages are washed. All gauze bandages and those which have been cut in removal, whether gauze or muslin, are sent to the cotton picker. The muslin bandages, after washing, are sent to the students' cloak room, where the attendant in his spare time rolls them and returns them to the surgical supply room for distribution.

(c) RUBBER GOODS.—Rubber gloves with holes or small tears, etc., are mended in the operating rooms as long as they can be used there. When the operating rooms discard them, they are sent to the surgical supply room, where certain of them can again be mended and used by the workers who sort the soiled gauze. There are two methods of mending rubber gloves. One is by the use of thin rubber dam, or pieces of discarded gloves and rubber cement, and the other is by the use of adhesive rubber dam, manufactured by the Goodrich Rubber Company. The latter is the better method.

All gloves which cannot be repaired, as well as all other old rubber goods, are sold as old rubber.

B. FOOD WASTE.

The food sent from the wards is not all waste. There are two kinds:

1. The excess left after serving the patients.
2. That which is left on the patients' trays.

The latter is all put into the garbage can and sent to the incinerator. The former is returned to the kitchen in the original containers in which

[1] This is the ninth and last of the series of articles on Internal Administrations of a Large General Hospital; last month, "Surgical Operations and Surgical Dressings."

it was sent to the wards. The principal items here are:

(a) SOUP.—Can be used again.

(b) MEAT.—Is used as soup stock, hash, or meat loaf in the help's dining room.

(c) VEGETABLES.—Used for soup or stews.

(d) BREAD.—This is returned in paper bags, and is used for fowl dressing, croquettes, and the stale excess is fed to the animals (guinea pigs, etc.) in the experimental laboratories.

A word should be said about eggs. On all the wards a good deal of albumen water is given, necessitating the use of the white of the egg, leaving the yolks. These yolks are used in the public wards and diet kitchen in making custards.

C. GARBAGE.

All garbage from each ward is put into a tin can, especially kept for that purpose, and collected once daily and taken to the central garbage room, where it is examined on the inspection table. This table has a slate top, with two sides and one end inclosed by a 6-inch slate railing. The inclosed end is wider and higher than the open end. The garbage is dumped on the wide, high end and drawn down the table to the narrow end, where it falls into the carrier which transports it to the incinerator. While the garbage is on the table it is carefully inspected, not only for table utensils, surgical instruments, etc., but also for any excess food, which would show faulty or careless methods in a ward. A record is kept of the amount and character of the waste from each ward.

The incinerator is not in the garbage room, but is in the lower basement. It is so constructed that its top is on the level with the floor of the room, thus facilitating the handling of the garbage. The fuel used is coal.

The method just outlined for sending back gauze, dressings, etc., and unused food, and the collection of garbage, prevails in all the wards in the hospital, except the isolation ward. In this unit no food is returned, no garbage is sent to the main incinerator, and no dressings are sent down for washing. Obviously this is not practical, and this ward unit has its own incinerator, where all the waste of that ward is at once destroyed. This is a small incinerator operated by gas.

There are in this hospital three incinerators—the two just mentioned and a third in the clinical laboratory, where sputum is examined. Throughout the hospital sanitary paper sputum cups are used, and when once used are burned. This incinerator is therefore in great demand, and a large measure of safety to doctors, nurses, and employees. The use of these incinerators brings up the question of the relative value in hospital efficiency of one central incinerator or of many. If each ward had its own incinerator, there would be the saving of labor in transporting the garbage from the ward to the central garbage room, and from there to the incinerator. It would also save the services of at least one man in charge of garbage inspection and the incinerator. On the other hand, this saving of labor would not seem to us to offset the saving resulting from the more careful inspection of garbage in a central room by a responsible person whose duty it is to watch carefully for waste and lost articles, such as table utensils, surgical instruments, hypodermic syringes, rubber goods, etc. This one garbage inspection is also an excellent check on carelessness in the different departments.

FIRELESS COOKER FOR TEN CENTS.

Flour Box and Newspapers Make Ideal Container—Enameled Pails Are Best Utensils.

Those foods which can be best prepared in fireless cookers are soups, cereals, and stewed fruits. A New York City woman describes as follows a home-made fireless cooker which can be made at an expense of ten cents:

It consists of a 2-foot deep tin flour canister—bought at a sale in a 5-and-10-cent store—lined with seventy thicknesses of common newspaper, and provided with two clean old woolen blanket ends which are used to wrap around vessels containing the food to be cooked.

First I cut the newspapers the exact height of the canister, leaving them at their ordinary width; then I lined the canister as smoothly as if the paper had been plaster, putting in one sheet at a time and lapping the ends closely, but not all in the same place, for so much doubling would have made an awkward hump. The last few sheets I bradded top and bottom with paper fasteners.

Then a seventy-fold newspaper mat was made for the bottom of the canister, made to fit accurately, so that the edges left not the tiniest air spaces between them and the linings of the sides. The cover of the canister was fitted in the same way, with the addition of a heavy circle of blotting paper pasted over the newspaper pad and its turned-in edges glued to the tin rim of the cover. Now the cooker was ready for use.

I used three small enameled pails for cooking vessels. While washing the breakfast dishes, I set the pails with their prepared contents on the lighted gas range to give them five minutes start. A stew should always be placed in the middle of the cooker, where the heat is retained longest. When placing food in the cooker, one end of a woolen cloth went around the first bucket very snugly, so that it had to be crowded down with force; the other end wrapped the middle bucket just as tightly. The second cloth both wrapped and covered the last bucket.—*Woman's Home Companion.*

The Royal Free Hospital, Gray's Inn Road, London, has the honorable distinction of being the only large hospital in that city with an attached medical school which has opened its doors to women students. The medical staff includes some of the most eminent medical women in the country. The new hospital for women, Euston Road, was the first general hospital for women officered by women in London, and its ever-increasing popularity affords striking proof of the confidence in which women hold doctors of their own sex.

THE BOOM IN DISPENSARY WORK—ITS GROWTH AND DEVELOPMENT.

Following a Period of Marvelous Increase in Numbers, These Institutions Must Now Systematize Their Work, Improve Their Technic, and Regularly Test Their Results.

By MICHAEL M. DAVIS, Jr., Ph. D., Director of the Boston Dispensary.

THE first American dispensary was established in Philadelphia one year before the adoption of the constitution of the United States. Three such institutions "for the relief of the sick poor" had been established by 1800, there were about 100 by 1900, and there were six or seven times as many by 1913. The development has been extremely rapid during recent years. There are probably 700 dispensaries and out-patient departments in the United States today, excluding purely commercial and advertising institutions, and they treat annually at least 3,000,000 patients.

No form of organized medical work has in recent years grown so rapidly, none in such haphazard and unstandardized ways, and yet probably no form of service in medical institutions is capable, under right development, of rendering larger benefit to public health.

In 1904 the United States Census Bureau issued a report on "Benevolent Institutions," in which 156 dispensaries were listed. As these figures exclude a number of out-patient departments of hospitals, 200 is a more probable number. A similar report just issued by the same bureau gives the figures for 1910 and records 574 dispensaries, an increase in six years of 287 percent. This figure is from 10 to 15 percent too low. In Massachusetts alone, in 1910, there were 43 dispensaries and out-patient departments, of which the census report lists only 34. The directory of the National Association for the Study and Prevention of Tuberculosis shows that of the 300 odd clinics open in 1910 for the treatment of that disease, about 40 were not recorded by the census. The number of dispensaries in the United States in 1910 was probably about 650. The number of patients treated is recorded by the census as 2,440,018 in 1910, a number which is not accurate, as we shall show. Even this figure is 50 percent above the number reported six years before. In 1904 dispensaries were found in only 21 of the 48 states, and in 1910 in 38 states. They are, however, relatively concentrated, 89 percent of the patients recorded for 1910 being in the 8 states of New York, Pennsylvania, Massachusetts, Illinois, Maryland, New Jersey, Ohio, and Missouri.

The general character of the dispensaries recorded by the census is shown from the following table:

General dispensaries receiving more than 1,000 patients a year	291
General dispensaries receiving less than 1,000 patients a year	62
Dispensaries for tuberculosis only	167
Other dispensaries for special diseases (eye, ear, nose, and throat, gynecological, etc..	53
Dispensaries not in operation in 1910	1
Total dispensaries in the United States in 1910	574

INACCURACY OF CENSUS FIGURES.

While the census figures give an interesting view of the general situation, they are untrustworthy in detail. Take the matter of the number of patients treated: the statisticians of the census bureau did their best, but the fact is that a considerable proportion of the out-patient departments, and even some of the dispensaries separate from hospitals, do not keep their records so that they can report the number of patients cared for in a year. Some institutions evidently confuse ward-patients with out-patients; others apparently report visits or consultations instead of individual patients. Such returns have been made not so much because of carelessness as because there are no established methods of record-keeping in out-patient departments and dispensaries. This is even more true of financial statements. As the above table shows, there were 291 general dispensaries and out-patient departments recording more than 1,000 patients a year. Fifty of these did not report the number of patients, 115 made no separation whatever of dispensary costs from the costs of the hospital, and only 100 reported both the number of patients treated and the expenses.

In these 100 cases we can divide the annual running expenses of each institution by the number of patients treated; the *average cost* per patient treated is thus obtained, which varies from $0.04 to $8.96. The figures for two institutions show a cost below 10 cents; for twenty-five, a cost above $1; and for three, above $5. The truth is that these figures lead to nothing, except perhaps one negative conclusion—that the census reports of both patients and finances are untrustworthy. Some hospitals evidently charge to their out-patient departments only a few immediate ex-

penses. One institution reports 20,000 patients treated (probably visits) and $2,000 as the annual running expense. Another reports 9,811 patients and $350 expended. At the other extreme, one reports 3,360 patients and $19,309 disbursed. The explanation of some of the higher costs is that expenses entirely unconnected with the dispensary were lumped in. The opposite error is more usual.

LACK OF STANDARDS OF OUT-PATIENT WORK.

Institutions would not render such reports were there even the most elementary out-patient standards. No hospital would think of reporting, publicly, a per capita cost per bed per day of either 40 cents or $10. If the housekeeper presented such figures, the superintendent or trustees would stop their progress before they reached a printer. But dispensary accounting and dispensary statistics are in most institutions in a pre-Adamite stage.

Unsatisfactory as the census figures are, they do indicate that dispensaries are numerous enough, large enough, and growing fast enough to be worth criticising. Until recently most of what was said on this subject came as a heated declaration that dispensaries cut into the clientele of the general practitioner. Protests against this form of "dispensary abuse" have appeared with varying frequency in medical literature since about 1875. Six or eight years ago a few medical men began to criticise another kind of abuse in dispensaries—overcrowding, poor equipment, inadequate service. Dr. Goldwater's stirring article on "Dispensary Ideals," published seven years ago in the *American Journal of the Medical Sciences* (N. S. vol. 134, p. 313), presented a forceful indictment.

CONSTRUCTIVE CRITICISM.

Still more recent have been case studies showing actual results achieved in benefiting patients by dispensary treatment. During the last two years such efficiency tests have been conducted at the Boston Dispensary, Massachusetts General Hospital, Lakeside Hospital, and elsewhere, with the well-founded hope of leading to constructive plans for improvement. The most extensive study made according to this plan has been just published by the Board of Estimate and Apportionment of New York City through its committee on inquiry into the Departments of Health, Charities, and Bellevue and Allied Hospitals. The investigation was under the direction of Mr. Henry C. Wright. It is worth reviewing both for its methods and its results.

Gouverneur Hospital out-patient department, located on the lower East Side under the general management of the Department of Bellevue and Allied Hospitals of New York City, records at present the enormous total of 67,000 patients annually. Mr. Wright and his staff studied the first 1,000 cases which came to this out-patient department during the first few weeks of January, 1913, taking them in order from the register of four clinics. These patients were visited at their homes, and information gathered regarding the living conditions, finances of the family, number of visits paid at the out-patient department, and the medical results secured so far as ascertainable. The average number of visits paid per patient, a very useful general index to the efficiency of treatment, was only 2.3 in the general medical clinic at Gouverneur; and 3.7 in the gynecological. These, as compared with corresponding clinics at other dispensaries, appear to be from 50 percent to 100 percent smaller than they should be. Of the 1,000 patients—

52.6 percent paid only one visit; over half of these, when seen in their homes, stated that they received no benefit.

47.4 percent made two or more visits; among this group 6.4 percent stated that they had been cured; 14.5 percent stated that they had been benefited; 26.5 percent believed that they had not been benefited.

Thus, of the entire group, over 52 percent are believed to have received no benefit. This is partly accounted for by overcrowding. On one day an investigator saw 163 patients "treated" by two physicians in the female medical clinic in one hour and thirty minutes. No detailed physical examinations under such conditions are possible; no attempt appears to have been made to perform such—much less to make record of anything more than name, age, address, and diagnosis. At an out-patient clinic serving such a district as does Gouverneur thousands of patients must come from homes so oppressed by poverty or other limitations that effective treatment without the aid of a social service department is impossible. Gouverneur has no social service department.

EFFICIENCY TESTS.

Mr. Wright's report includes a striking contrast, in parallel columns, between 100 cases selected from the files of the Presbyterian Hospital out-patient department in New York and the same number of cases from Gouverneur. The cases from the Presbyterian Hospital were selected at random, except that they were patients who had been referred to the social service department. The cases from Gouverneur were selected as having medical problems in general similar to those of the Presbyterian group. Mr. Wright's investigation at the Gouverneur showed a percentage of wasted effort ranging from 50 to 88 percent in the different clinics studied. In the 100 cases selected from the Presbyterian out-patient depart-

ment the combined medical and social service brought about an apparent cure, or lasting benefit, in 83 percent, leaving a waste of only 17 percent.

Too much weight must not be given to such comparisons, as the number of cases is small, and the question of selection enters. Exception may also be taken to judging results achieved in the clinics on the basis of statements made by patients themselves when seen in their homes. The facts brought out by Mr. Wright as regards overcrowding and the large proportion of patients who made only one visit to the clinics did not, however, involve matters of judgment. The less that efficiency tests are dependent on subjective estimates, the more impersonal and effective they become.

Mr. Wright's constructive recommendations are made with special reference to Gouverneur Hospital, but are intended also as a general scheme for the organization of an out-patient department. It is rather a pity that his many detailed recommendations were given so much the color of generality. The problem of dispensary organization involves many different considerations, varying with the size, location, and medical and social environment of the institution.

Plans of dispensary organization which are to be generally applicable must not go into detail, while plans that do go into detail must be explicitly designed for particular types of dispensaries.

The dispensary problem is as many-sided as that of the hospital. We have the small local dispensary unconnected with a hospital; at the other extreme, the large out-patient department receiving patients from a wide area; the large dispensary centrally located and unconnected with a hospital; the dispensary treating special diseases, such as tuberculosis, eye diseases, or maternity cases; the out-patient clinics attached to industrial establishments; rural dispensaries; self-supporting dispensaries. Each class has its special problems of organization, equipment, and administration.

STANDARDS OF DISPENSARY WORK.

The time is evidently approaching when at least minimum standards must be formulated. The dispensary is coming to be recognized not only as a feeder for medical schools and hospital wards, but as having its own justification. This has been particularly notable in certain branches of special work. The antituberculosis campaign has utilized the dispensary on a national scale. The last issue of the directory issued by the National Association for the Study and Prevention of Tuberculosis shows that on May 1, 1913, there were 293 dispensaries in the United States established solely for tuberculosis, in addition to 96 tuberculosis clinics which were parts of general dispensaries.

The still more recent movement for the proper treatment of mental diseases and the promotion of mental hygiene is beginning to utilize the out-patient department. The Psychopathic Hospital in Boston and the Phipps Psychiatric Clinic in Baltimore are two leading illustrations. The New York Legislature in 1913 passed a law, now in effect, permitting each state hospital for the insane in New York to establish an out-patient department. Dr. Thomas W. Salmon, of the National Committee for Mental Hygiene, commenting on this in a recent article in the Chicago *Post* (January 19, 1914), said, "This opens a way for efficient treatment in the earliest stages of persons ill with mental diseases, and at the same time makes it possible to discharge convalescing patients who, previously, had to be kept from their friends and families because it was impossible to provide skilled observation and advice after they had left the hospital."

The time is at hand for working out the special functions of the dispensary or out-patient department, not only as an adjunct of a hospital, but as an independent agent of curative and preventive medicine. Meanwhile it is extremely important to develop aright the technical standards of construction, equipment, medical organization, nursing and social service, record keeping, business administration and accounting, which at the present time are so deplorably at variance in different institutions.

It is significant that at the last meeting of the American Hospital Association a committee of five was appointed to present a report, at the St. Paul session next August, on Standards of Out-Patient Service.

Facts and ideas are now needed—facts showing what is the actual practice in different types of dispensaries; ideas indicating what the practice in dispensaries ought to be and can be. The facts given in the census report are not sufficiently accurate or specific to be of value in this way. Material must be gathered, digested, and placed at the general disposal, so that medical men and administrators of different institutions may learn from one another. Questionnaires which were sent out under the auspices of the American Hospital Association in 1913, and which will be followed by others this year, will assist in this process, but they should be supplemented by a personal survey of the chief centers and types of dispensary work.

The last ten years have been a period of remarkable increase in dispensaries in the United States. This period ought now to be followed by

one of intensive development, when the emphasis will be laid on advancement in technic and quality of service. During this period the dispensary must achieve recognition as a special division of medical work—of public health work, we might say—and its own problems of organization and administration must be studied as such. Dispensary methods must be improved and accepted standards attained, even minimum standards. For the achievement of this end we need the cooperation of those who view the dispensary from the standpoint of the medical practitioner, as well as from that of the administrator, the trustee, and the public health official.

THE NEW CHILDREN'S HOSPITAL AT LOS ANGELES, CALIFORNIA.

Many Unique Arrangements in Architecture and Equipment—Nurses' Home With Individual Bed Rooms, Sitting Rooms, and Sleeping Porches—New Form of Doctors' Scrub Sink—New Window Device.

By MISS MARIAN L. VANNIER, R. N., Superintendent.

THE new Children's Hospital recently erected on Sunset Boulevard in Hollywood, Los Angeles, Cal., has created a lively interest and comment among physicians and others concerned with hospital development because of certain features in the arrangement and equipment which make it somewhat different from other hospitals in this part of the country. The building site is particularly well chosen. It consists of four acres of land on the outskirts of the city, ten miles from the Pacific Ocean on the south and about the same distance from the Sierra Madre Mountains on the north.

Sunset Boulevard is a part of "El Camino Real," or the King's Highway, the old road used by the Franciscan fathers in their mission work, and extending from San Diego to San Francisco and beyond, now the automobile boulevard from the mountains to the sea. The hospital, although situated in the open country, with fields and orange groves on all sides, is only twenty minutes from the heart of the city of Los Angeles, and convenient for street cars and ambulance.

The new hospital is of the pavilion type, and consists of a group of four buildings, open on all sides to the sunlight and fresh air. The buildings are connected by corridors, and under these corridors are tunnels which carry all the piping for gas, electric lights, water, steam, etc. These tunnels open into the power plant, and the pipes are always accessible should any trouble occur.

The first of the group, the administration building, occupies the highest part of the property, fronting on Sunset Boulevard, with sufficient space on the left for a future private ward. On the right of the administration building is the second of the group, the public ward building, with ground space to the west for three or more of these public wards to be built later. Directly south of the administration building, and attached to it by a bridge, is the third building of the group, the nurses' home, which affords accommodation for fifty nurses. The power plant and laundry, which comprise the fourth building, are entirely separated from the others except for the tunnels, which carry the water, light, and power to all parts of the plant. The buildings are of fireproof construction, and of the pure white Italian style of architecture. The entrance to the private wards and nurses' home is through the administration building. All public ward patients are admitted to the hospital through the dispensary, which occupies the ground floor of the public ward building.

The ground floor of the administration building provides for the officers', nurses', and employees' dining rooms, the main kitchen, scullery, and ice plant, the nurses' diet school, the central linen room, orthopedic gymnasium, and store rooms for groceries, drugs, and other supplies. On the first floor is the main entrance and reception hall, the offices, a suite of rooms for the interns, and five private rooms, with lavatories and bath rooms.

Almost one-half of the second floor has been arranged for an infant ward, with bath room, milk laboratory, lavatories, and screened porch. In the infants' bath room marble slabs have been built in to take the place of tubs. These slabs are set at table height, and have enough slope to afford a proper drainage into a basin set between them, the arrangement being very much like the drain boards on a kitchen sink. On the wall about three feet above the basin there is a flat nickeled tank holding twenty gallons of water, with a thermometer on the face to indicate the temperature of the water. To this tank are attached the sprays, such as those used for shampoo. Fixed to the wall just above the marble slab there is an opalite shelf for the glass jars and bottles, containing everything for the care of the babies. When preparing to bathe a baby the nurse covers the slab with a white quilted pad, on which the baby is placed. It is

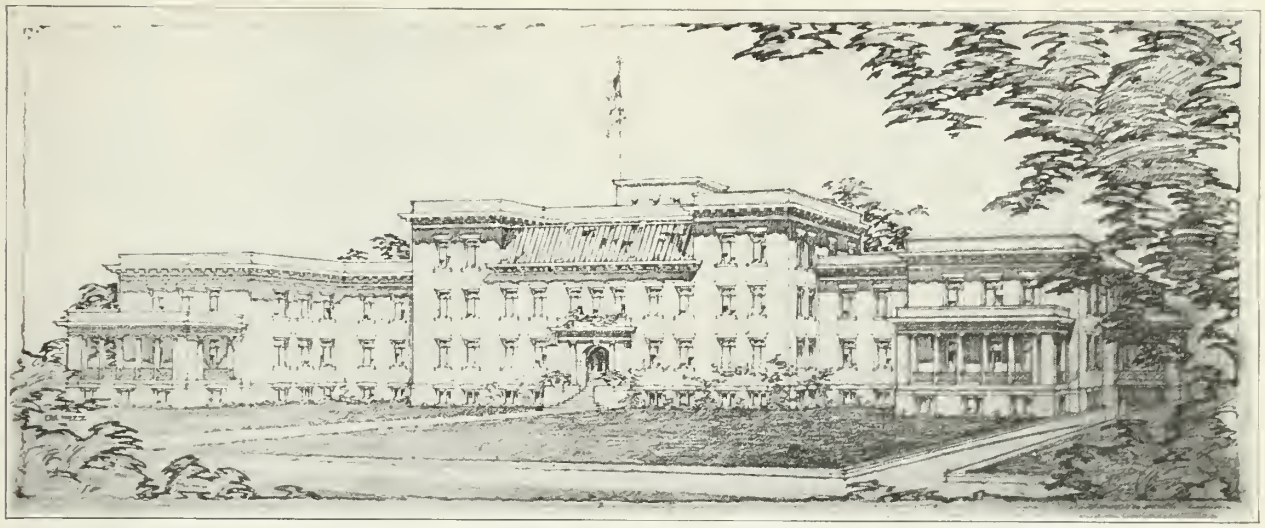


Fig. 1. Children's Hospital, Los Angeles, Cal.

then soaped with a liquid soap and sprayed with warm water. In this way all the danger of infection from tubs is obviated. After bathing, the baby is transferred to the warm surface afforded by the top of a blanket warmer built at table height, where it is weighed and dressed in warm, fresh clothing, which is taken from the warming oven as needed. The infants' bath room is also equipped with a sink for the purpose of washing the nursing bottles after each feeding hour. These empty bottles are stored in drums which fit into a sterilizer placed horizontally through the wall between the infants' bath room and the milk laboratory. The sterilizer is equipped with doors at each end. The bottles are put in, and the sterilizer closed and operated from the unsterile side. After a sufficient steam disinfection the sterilizer is opened from the milk room side and the sterile bottles filled with formulas prepared by the nurse or nurses especially assigned to this duty. The milk room is equipped with sterile water tank and sterilizer for warming the milk, and also a large refrigerator which contains the wire baskets or racks for the bottles. Each baby has a rack, with its name and number, and containing the required number of feedings for twenty-four hours.

Every lavatory in the hospital is provided with a deep sink for disinfecting linen. These may be used as an ordinary open sink for washing or scouring basins, etc., or, if the need arises, infected linen or utensils may be boiled in the same sink by turning the steam into a coil of pipe fixed to the bottom for that purpose. Each sink is equipped with a detachable cover. The remainder

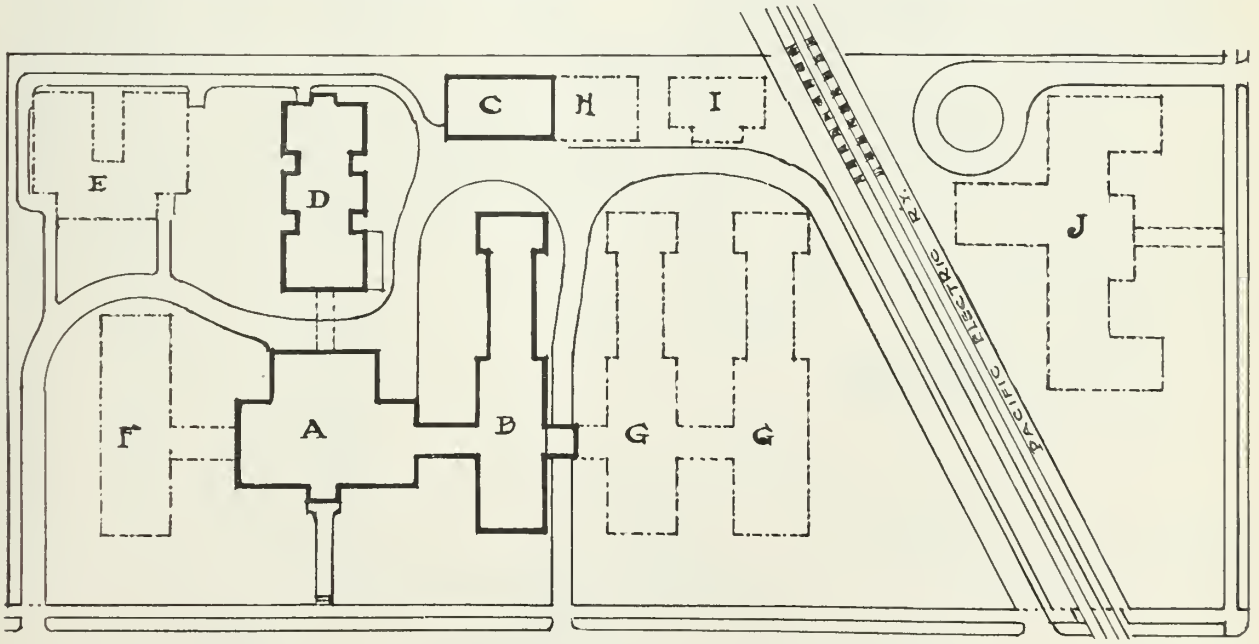


Fig. 2. Children's Hospital—Block plan.

A. Administration building.
B. Public ward.
C. Power building.
D. Nurses' home.
E. Isolation ward
F. Private patients.
G. Additional public wards.
H. Power extension.
I. Domestic help's quarters.
J. Convalescent home.

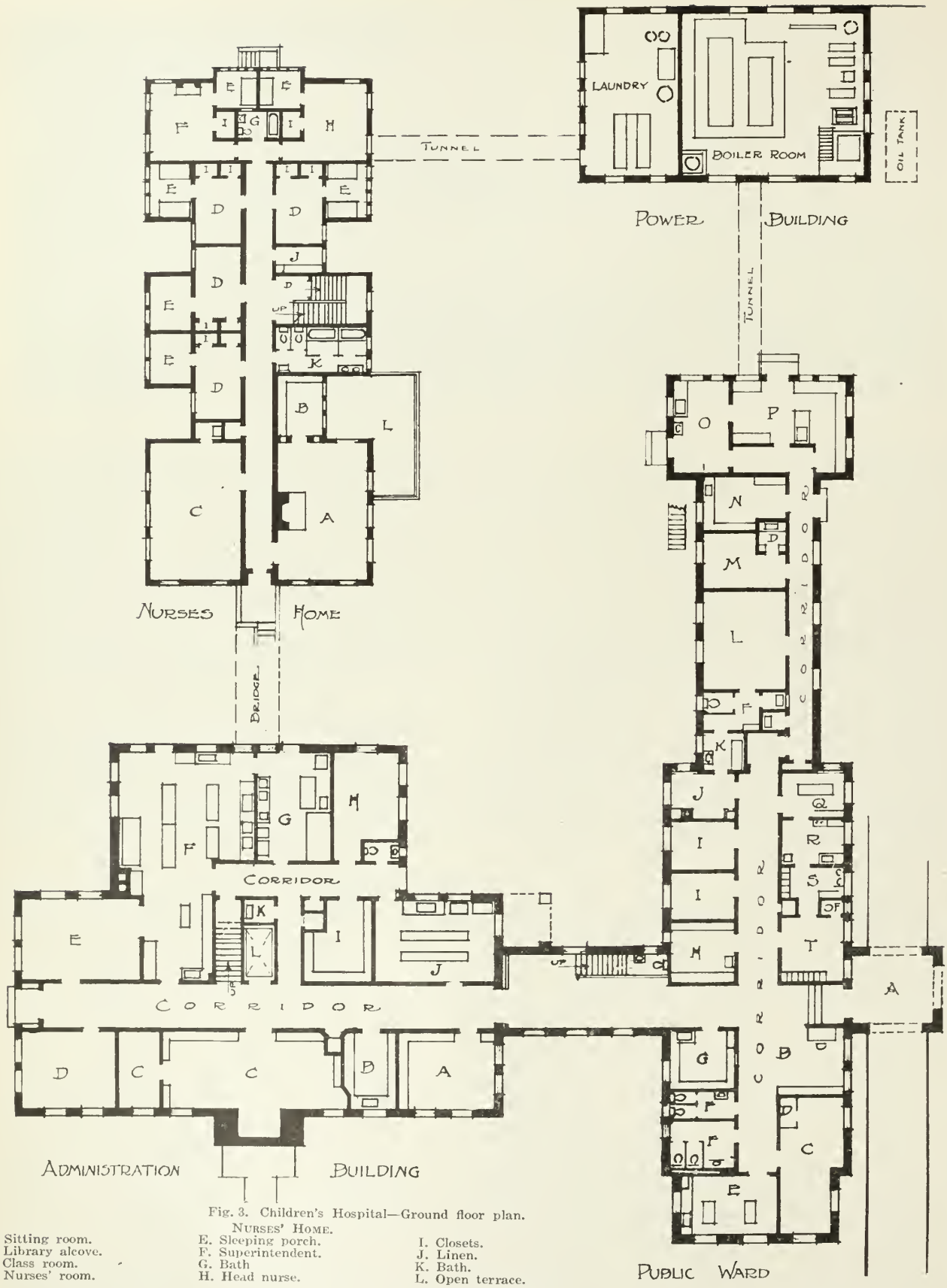


Fig. 3. Children's Hospital—Ground floor plan.

NURSES' HOME.

A. Sitting room.
B. Library alcove.
C. Class room.
D. Nurses' room.
E. Sleeping porch.
F. Superintendent.
G. Bath
H. Head nurse.
I. Closets.
J. Linen.
K. Bath.
L. Open terrace.

ADMINISTRATION BUILDING.

A. Linen and sewing room.
B. Drug storage.
C. General stores.
D. Staff dining room.
E. General dining room.
F. Kitchen.
G. Scullery.
H. Help's dining room.
I. Kitchen stores.
J. Diet instruction.
K. Janitors' closets.
L. Elevator.

PUBLIC WARD.

A. Carriage porch.
B. Waiting lobby.
C. Eye room.
D. Dark room.
E. Dental room.
F. Toilets.
G. Dispensary.
H. Nurses' supplies.
I. Examination rooms.
J. Dressing rooms.
K. Bath rooms.
L. Recovery ward.
M. X-ray.
N. Shop.
O. Autopsy room.
P. Laboratory.
Q. Minor operations.
R. Preparation.
S. Scrub room.
T. Doctors' room.

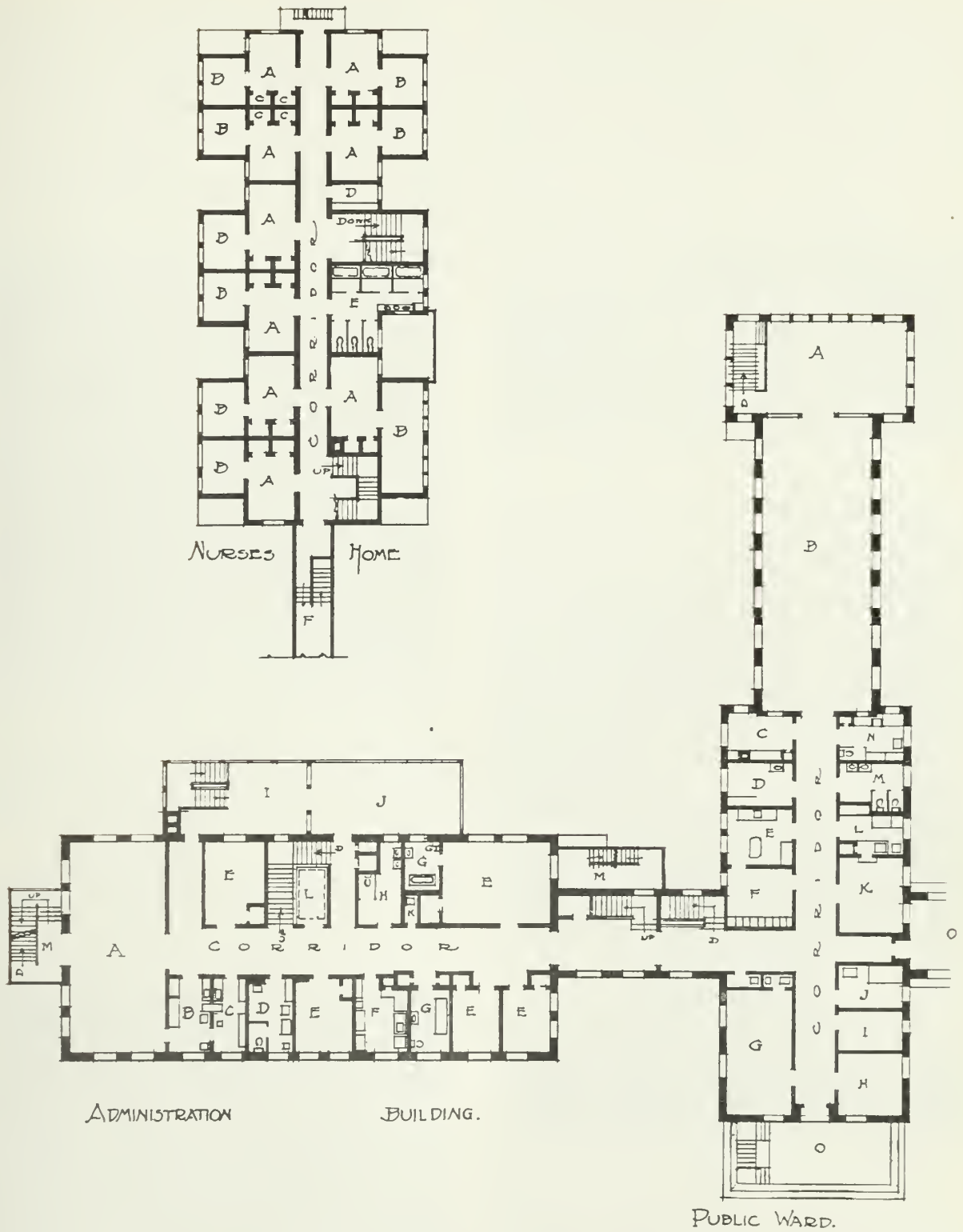


Fig. 4. Children's Hospital—Second floor plan.

NURSES' HOME.

A. Nurses' room.
B. Sleeping porch.
C. Closets.
D. Linen room.
E. Lavatory.
F. Bridge.

ADMINISTRATION BUILDING.

A. Baby ward.
B. Baby bath.
C. Milk room.
D. Nurses' lavatory.
E. Rooms for private patients.
F. Diet kitchen.
G. Bath.
H. Lavatory.
I. Screen porch.
J. Open porch.
K. Janitor.
L. Elevator.
M. Iron stairs.

PUBLIC WARD.

A. Screen porch.
B. Ward, 16 beds.
C. Chart room.
D. Surgical dressing.
E. Bath.
F. Dressing room.
G. Ward, 3 beds.
H. Ward, 2 beds.
I. Quiet room.
J. Blanket drying.
K. Dining room.
L. Diet kitchen.
M. Lavatory.
N. Nurses' lavatory.
O. Open balconies.

of the second floor of the administration building is occupied by five private rooms, with the necessary bath rooms, lavatories, and diet kitchen.

The whole of the third floor is used for the major operating rooms. The two main operating rooms and the larger sterilizing room, which latter is between and common to both, have a north

Fig. 5. Children's Hospital—View from northwest.

exposure, which insures a pure white light without shadows. The entire fronts of the operating rooms are of glass, sloping slightly in the manner of a photographer's light, and extending to the ceiling and for a distance of several feet back on the roof as a skylight. The service rooms include a head nurse's office and laboratory, an etherizing room, doctors' dressing room, nurses' dressing room, doctors' scrub room, and the gauze room. A very practical arrangement has been worked out for the doctors' scrub room. A long, narrow

Fig. 6. Children's Hospital—Public ward.

porcelain tub, raised to a suitable height on a tiled base, is placed lengthwise in the middle of the room. Pipes are led down from the ceiling above, terminating in a single-action valve just over the tub. When the scrubbing up has been accomplished, this valve may be easily closed by pressure with the back of the scrub brush, which is then dropped into the tub, leaving the hands uncontaminated. The temperature of the water is regulated by a mixing valve, and is adjusted by the nurse when preparing for operations.

Opening into the gauze room is a small sterilizing room, provided with a glass shelf for mixing ointments, a porcelain sink, and the big pressure sterilizer. This arrangement has proved a great economy of labor for the nurses, since the sterilizer is at all times available for use. Had the usual plan been followed, the pressure sterilizer would have been part of the large sterilizing room equipment, and set on the same stand with the hot and cold tanks, and glove and instrument boilers, and not practicable for use during operations.

Fig. 7. Children's Hospital—Infant ward.

The ground floor of the public ward building is used as a dispensary or out-patient department. This provides for medical and surgical, eye, ear, nose, throat, and dental clinics. There is also a suite of minor operating rooms, a recovery ward of 8 beds, a pharmacy, an x-ray room, a shop for making splint and extension apparatus, a clinical laboratory, morgue, and autopsy rooms.

The first floor of this building is devoted to the boys' ward and the second floor to the girls and young children from one to four years. These wards are identical in their arrangement, and a

Fig. 8. Children's Hospital—Screen porch ward for tuberculous cases.

description of one will suffice for both. Each public ward is divided into three parts—the main ward of 16 beds, 8 on a side, the large screened porch ward of 12 beds for the tuberculous hip and spine cases, and the small wards for those that are very ill. These small wards consist of

three rooms for five, three, and one patient, respectively. These rooms are separated from the main ward by a suite of service rooms, comprising a dining room, diet kitchen, children's lavatory, and nurses' lavatory on the right, and head nurses' office, surgical dressing room, bath, and locker rooms on the left. The nurses' lavatory and head nurses' office are supplied with windows looking into the ward, which proves of great assistance in keeping the patients continually under observation. A linen press is built into the head nurses' office and there the daily supply of linen is kept.

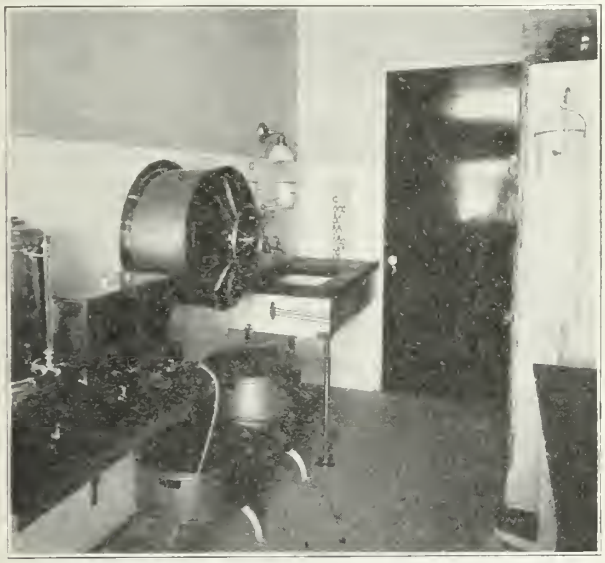


Fig. 9. Children's Hospital—Milk laboratory, showing sterile end of bottle sterilizer.

The surgical dressing room is of the greatest service in children's work. All surgical patients are taken to this room for dressing. The room contains an incinerator for burning the used dressings, a gas plate for boiling instruments, a cupboard for supplies, a dressing table, doctors' wash stand, and a wheel stretcher. All of the beds are provided with three-inch rubber-tired wheels, and, when necessary, the bed is pushed into the dressing room and the dressing is done without moving the patient. Next to the dressing room is the bath room, which is provided with the marble slabs and nickeled tank, as described previously in the infant ward, as well as two porcelain tubs. One small tub is set high for the nurse to bathe the young children, and one considerably larger tub is placed very low so that the older children can easily step in and bathe themselves.

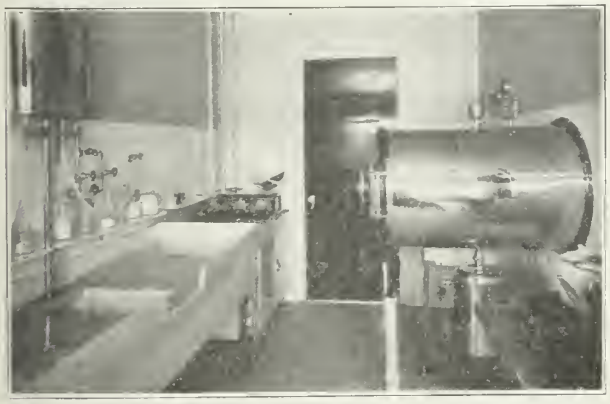


Fig. 10. Children's Hospital—Babies' bath room, showing marble bath slabs and unsterile end of milk bottle sterilizer.

In the locker room lockers are provided so that each child shall have a place for his own toys and the hospital clothes worn by up-patients. Patients are undressed and the clothes sent home on admission.

The nurses' home is a most attractive building. It provides accommodations for fifty nurses, and is entirely unique in the fact that every nurse's room is supplied with a sleeping porch. By this arrangement two nurses occupy a suite of two rooms, a sitting room or study, and a porch bed room.

Fig. 11. Children's Hospital—Surgeons' scrub room.

Each bath room includes three tubs set in cubicles, as well as three basins and three toilets arranged in the same manner, so that plenty of accommodation is provided. The living room, with library alcove and cement terrace, affords a pleasant recreation center.

The class room, which seats twenty-four students, is a cheerful room, provided with a built-in cabinet for articles of every sort used to demonstrate nursing procedures. There are blackboards on two sides of the room, and six windows to admit plenty of light and air. Out of the class room opens a small lavatory containing a sink, with hot and cold water, and shelves for linen and other equipment.

The entire hospital, including the nurses' home,

is supplied with the Bexhill windows, an ideal window for hospital use, as it is hinged in the center and can be opened from either or both sides. When pushed to the center, the whole window space is open to admit the air, the screen is on the inside, and the sash is operated from the inside without opening the screen. There is a transom above each window, which is opened by a fixture at the side of the window frame.

The hospital, although a fireproof building, is equipped with automatic fire doors. In the lobby of the administration building is the stairway and Otis automatic electric elevator. The power plant and laundry are equipped with modern machinery, and so situated as to obtain an unusual supply of light and air. The plan for an isolation ward, which will comprise four separate units, has been accepted and is to be built at once.

The hospital buildings were designed by Messrs. Summer Hunt and S. R. Burns, architects, of Los Angeles, and the work was executed under the direction and supervision of Mr. Burns, who had a very considerable experience in hospital work in the East before coming to Los Angeles.

ARTIFICIAL ILLUMINATION OF HOSPITAL SPACES.

Indirect Lighting Uniformly Desirable in Private Rooms, Wards, Dining Halls, Corridors, and Service Units—Chief Points to Be Considered—Some Lighting Problems Are Satisfactorily Settled.

By HARVEY B. WHEELER, Chicago.

IT IS only within the past two or three years that much attention has been given to careful planning of the illumination and the selection of suitable lighting fixtures for the hospital. It is proposed in this article to explain the systems of lighting that are coming into general use for the modern hospital. Prominent authorities who have investigated the injurious effects of exposed light sources in the range of vision agree that a well-designed system of indirect lighting is most desirable in hospital work.

The older school of hospital architects had a tendency to plan the furniture and the lighting fixtures with the utmost simplicity; today, however, it is considered good practice to use comfortable-looking furniture, and the walls and ceilings are decorated in pleasing colors. I know one architect in particular who not only recommends the use of artistic furniture, but further carries out ornamentation by using inlaid doors, etc. In many of his indirect fixtures he adds a touch of beauty by having the bowl illuminated at a low intensity, care being taken that the intensity of the bowl at no time will be greater than that of the ceiling. It has even been suggested that indirect floor and table portables would work out very nicely in many parts of a hospital, thus doing away entirely with ceiling fixtures.

From the preceding it would seem that illumination in the future is to play an important part in giving comfort to the occupants of the various rooms, thus doing away with the garish effect of exposed light sources, which have been so annoying in the past. For convenience in explaining the typical examples, I have divided the article into three parts.

PART I. INDIRECT LIGHTING—WARDS, PUBLIC AND PRIVATE.

Public Wards.—Many schemes have been advocated in the past for the correct lighting of wards. The trend of standard practice today is to conceal the light source and keep the illumination intensity fairly low—about ¾ to 1½ foot-candles[1] at the bed level.

It has proved very satisfactory in large installations to control each fixture by an electrolier switch in the fixture (Fig. 1), or by a suitable wall switch, arranged to give at least two intensities of illumination, as follows:

1. A low intensity to enable the nurses to wait on the patients at night—0.75–1.50 foot-candles.
2. A medium intensity for reading, etc.—1.5–3.0 foot-candles.
3. A high intensity for medical examinations at the beds—3.0–4.5 foot-candles.

Frequently 3 is omitted, and wall plugs between the beds provided for attaching exploratory lamps.

Fig. 2. Typical ward in Southern Pacific Hospital, San Francisco, Cal. Many of the wards in this hospital are very large, and in all the intensity is varied by means of dimmers. The 8-bed ward illustrated is 20x32 feet, with 11-foot 6-inch ceiling. There are two indirect fixtures, each equipped with two 60-watt clear bulb tungsten lamps, each lamp contained in an indirect reflector, suspended 36 inches from the ceiling; 0.38 watt per square foot is used, giving an average illumination of one foot-candle.

Fig. 3. Ward in Milwaukee Isolation Hospital.

[1] A foot-candle is the illumination received by a surface one foot distant from a light source of 1-candle power. It is a measure of the intensity received by an object.

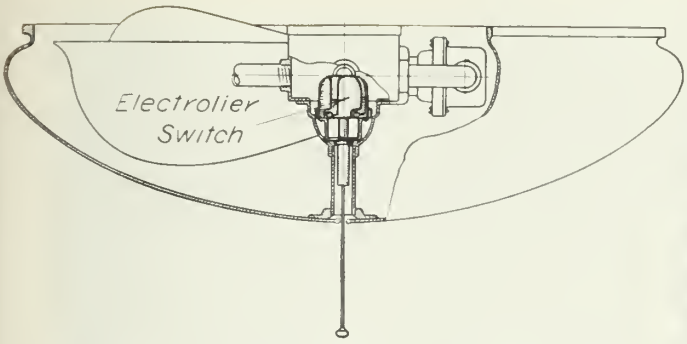


Fig. 1. Shallow bowl indirect fixture, showing electrolier switch.

The illustration shows a comfortable system of illumination for contagious disease patients. Practically the entire building is equipped with indirect fixtures. The ward is 33 feet 6 inches x 74 feet, with 15-foot ceiling. Ample illumination is furnished from seven 5-light fixtures, each containing four 100- and one 60-watt clear bulb tungsten lamps, each lamp contained in an indirect reflector, suspended 50 inches from the ceiling. With all lights burning, 1.3 watts per square foot are used, giving an average of 3.75 foot-candles. Each fixture is controlled separately by a pendant switch (Fig. 1), which gives 60 watts for dim, 360 watts for medium, and 460 watts for bright illumination. The latter intensity is not used a great deal.

Fig. 2. Typical ward in Southern Pacific Hospital, San Francisco, Cal.

Fig. 4. Ward in Chiswick Cottage Hospital, Chiswick, England. This is an 8-bed ward, 20x32 feet, with a 14-foot ceiling. There are three fixtures, each containing a 100-watt clear bulb tungsten lamp in an indirect reflector, suspended 36 inches from the ceiling. Watts per square foot, 0.47.

PRIVATE WARDS.—*Fig. 5.* Private room in Milwaukee Hospital, Milwaukee, Wis. The illustration is of the new surgical annex, the greater part of which is equipped with indirect lighting fixtures. Room is 14 feet 6 inches x 16 feet 6 inches, with 11-foot 6-inch ceiling. One shallow bowl fixture containing four 40-watt clear bulb tungsten lamps, each in an indirect reflector, give an average illumination of 2.0 foot-candles, with a wattage per square foot of 0.66. An electrolier switch (Fig. 1) controls the fixture for two intensities of illumination—one 40-watt lamp for dim and three additional lamps for reading purposes.

Fig. 3. Isolation Hospital, Milwaukee, Wis.

Fig. 6. Private room in Harper Hospital, De-

Fig. 4. Chiswick Cottage Hospital, Chiswick, England.

Fig. 5. Milwaukee Hospital—Surgical annex.

troit, Mich., illustrating a typical room, 11x18 feet, with a 12-foot ceiling. One indirect fixture containing two 60-watt clear bulb tungsten lamps, each contained in a shallow type indirect reflector, suspended 24 inches from the ceiling, furnishes an illumination of 1.75 foot-candles, with a current consumption of 0.60 watts per square foot.

Fig. 7. Nurses' duty room in Harper Hospital, Detroit, Mich. A typical duty room, 10x16 feet, with a 12-foot ceiling. Two indirect fixtures, each containing two 40-watt clear bulb tungsten lamps,

Fig. 6. Private room in Harper Hospital, Detroit, Mich.

Fig. 7. Nurses' duty room in Harper Hospital, Detroit, Mich.

are used. Tops of bowls are suspended 18 inches from the ceiling. Glass covers are used on the fixtures similar to Fig. 8A.

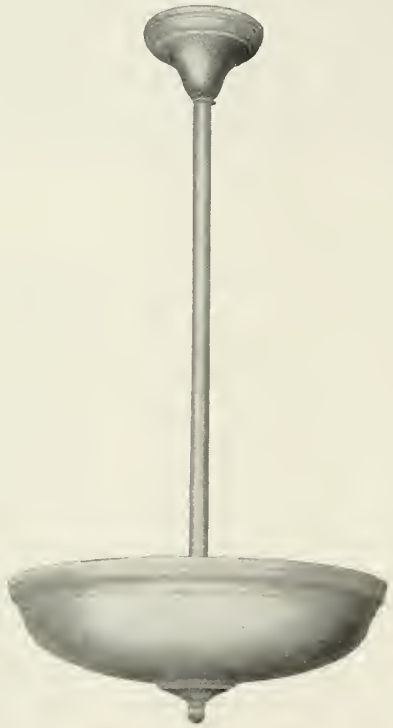


Fig. 8. Plain indirect fixture for wards.

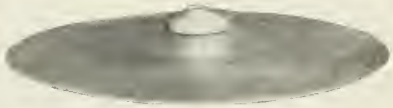


Fig. 8A. Glass cover.

OPERATING ROOMS.—*Fig. 9.* Toronto General Hospital, Toronto, Ont. Nine of the large operating rooms in this magnificent hospital are

Fig. 9. Typical operating room in Toronto General Hospital, Toronto, Can.

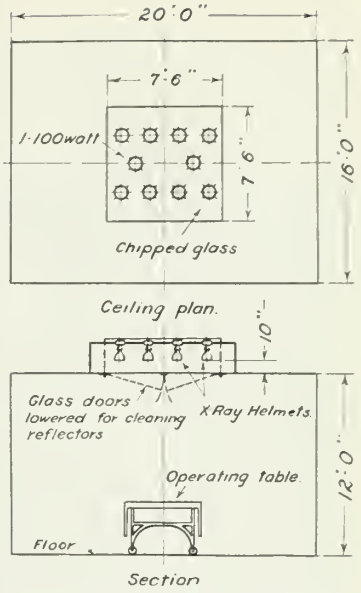
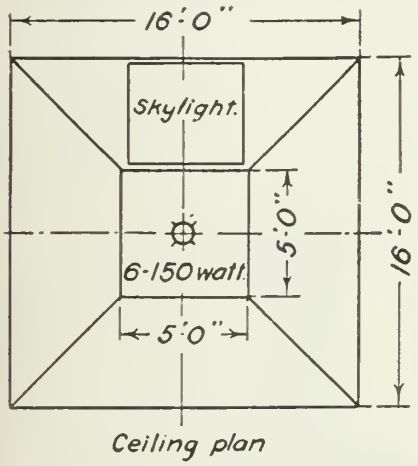


Fig. 11. Operating room in Southern Pacific Hospital, San Francisco, Cal.

equipped with the same type of indirect fixtures. The operating room is typical, being 20x24 feet, with a ceiling height of 14 feet. Two fixtures, each equipped with six 150-watt clear bulb tungsten lamps in indirect reflectors, suspended 36 inches from the ceiling, are used. The watts per square foot are 3.75, with an average intensity throughout the room of about 10 foot-candles. The fixtures and sustaining bowls for the indirect reflectors are finished in a flat white enamel to match the interior decorations of the room. The operating rooms are distributed as follows: surgical



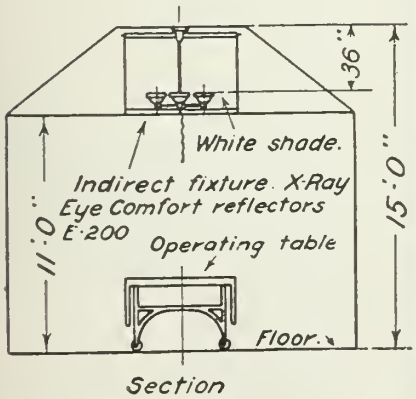


Fig. 10. Operating room in St. Mary's Hospital, Rochester, Minn.

Fig. 12. Typical hospital office.

wing building, one each on the first, second and third floors; out-patients' building, one on the first floor; administration building, two on the second floor and two on the third floor.

Fig. 13. Corridor in Harper Hospital, Detroit, Mich.

Fig. 10. Operating room in St. Mary's Hospital, Rochester, Minn. All operations by the Mayo staff are conducted in this building. Fig. 10 shows the layout of the typical operating rooms on the top floor. The north skylight is covered by a white shade when operations are being performed under the indirect system. An electrolier switch (Fig. 1) controls this fixture, so that two intensities of illumination may be obtained, one for the attendants to straighten up the room and the other for operating purposes; 3½ watts per square foot are used during operations, furnishing an intensity of about 9½ foot-candles.

Fig. 14. Staff dining room in Harper Hospital, Detroit, Mich.

With the introduction of the new high efficiency tungsten lamps, single unit indirect fixtures will probably be used largely in the future for operating room illumination. These lamps are filled with a nitrogen gas, which gives a very white light, closely approaching daylight. At present they are furnished in 400, 500, 750 and 1000-watt sizes. Combined with efficient one-piece silvered

Fig. 15. Indirect luminous wicker bowl fixture for sun porches.

glass indirect reflectors, these new lamps furnish a very efficient and hygienic unit (Fig. 23). Such a fixture as illustrated in Fig. 23 can be hung high above the operating table, and furnish ample illumination for the most delicate operations.

Fig. 11. Operating room in Southern Pacific Hospital, San Francisco, Cal., in which another system of diffuse illumination is used. A battery of ten x-ray helmet reflectors have been suspended above a chipped glass ceiling. This system has been in use for the past five years, and Dr. Ainsworth, chief surgeon and manager, is very well pleased with the results. The wattage per square foot is 3.13 and the average foot-candles over the entire room is approximately 10. One great advantage of the systems explained above is due to the good diffusion secured and elimination of glare and heat from appliances suspended over the head of the operating surgeon. The method of cleaning these fixtures is very

Fig. 16. Surgical dressing room in Harper Hospital, Detroit, Mich.

simple, as will be readily noted from the plan and section.

OFFICES AND RECEPTION ROOMS.—The same care should be exercised in planning the office illumination as in other parts of the institution. In a hospital there is always a large amount of clerical and detailed book work to be performed. Indirect lighting proves very restful for this class of work, as it removes annoying glare from glazed surfaces, and practically eliminates all shadows. Fig. 12 illustrates a typical office 23x13 feet 6 inches, with a 10-foot ceiling. There are two indirect fixtures, each containing indirect reflectors,

Fig. 17. Plain and inexpensive direct lighting fixture.

suspended 30 inches from the ceiling. One 250-watt tungsten lamp is used in each fixture.

CORRIDORS.—I believe the subject of corridor illumination has not been given the careful attention it deserves. Many are inclined to believe that if there is satisfactory illumination in other portions of the building, the corridors are not so important. This, however, is not the case, as any one who has had the misfortune to be confined in a hospital will know that in going from a ward or private room to the operating table it is very disagreeable to view exposed light sources. This occurs just at a time when a person's constitution is at a low ebb, and anything that can be done to make conditions more comfortable should be carried out.

Fig. 13. Typical corridor in Harper Hospital, Detroit, Mich. The corridor shown is on the second floor, and is typical for the building; it is 192 feet long and 8 feet wide, with an 11-foot ceiling. Nine fixtures, each containing two 40-watt clear bulb tungsten lamps in indirect reflectors, are suspended 24 inches from the ceiling, 0.47 watt per square foot is used, giving an intensity of 1.25 foot-candles.

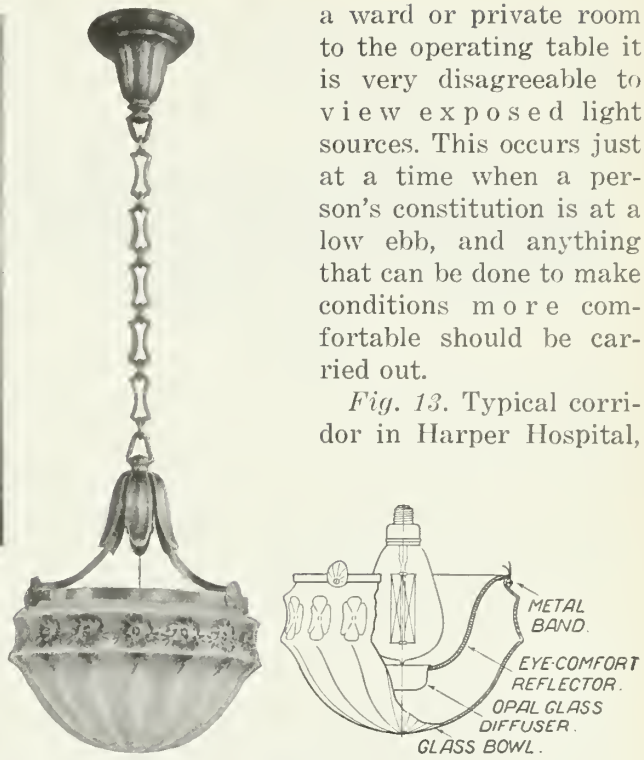


Fig. 18. Luminous bowl indirect fixture for private ward, reception room, etc.

DINING ROOMS.—*Fig. 14.* Staff's dining room in Harper Hospital, Detroit, Mich. This room is

Fig. 19. Luminous bowl, showing interior equipment. Very appropriate for large wards.

38x48 feet, with a 12-foot ceiling. Six fixtures, spaced equally between pillars, furnish ample illumination, about 2.25 foot-candles. The bowls are suspended 30 inches from the ceiling, and contain shallow type indirect reflectors. Four 60-

watt clear bulb tungsten lamps are used per fixture. Attention is called to the detail in which the furnishings on the table stand out and also the cheerful appearance of the room. The super-

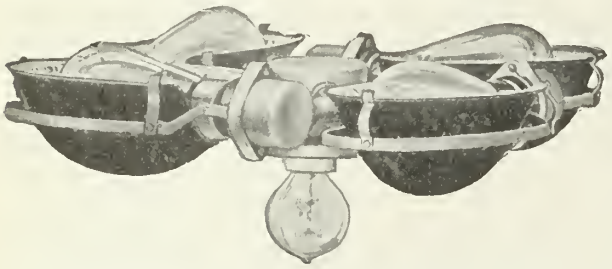


Fig. 19A. These lamps, in opaque x-ray eye comfort reflector, give the useful indirect light. The small lamp very softly illuminates the glass bowl for decorative effect only.

intendent's private dining room in Harper Hospital is 14x18 feet 6 inches, with a 12-foot ceiling. One indirect fixture, equipped with four 60-watt lamps, furnishes illumination, an average of 2.5 foot-candles. Indirect reflectors are used, suspended from the ceiling. Wattage per square foot, 0.88.

SUN PORCHES.—Even in many of the better hospitals the illumination of the sun porches has been given very little attention. A great deal can be accomplished in making the surroundings of these porches attractive to convalescent patients by dainty indirect fixtures, such as illustrated in Fig. 15.

MISCELLANEOUS ROOMS.—Indirect lighting, with plain fixtures, is being employed, with very satisfactory results, in such rooms as the following: sterilizing, nurses' dressing, doctors' dressing, anesthetizing, and duty rooms.

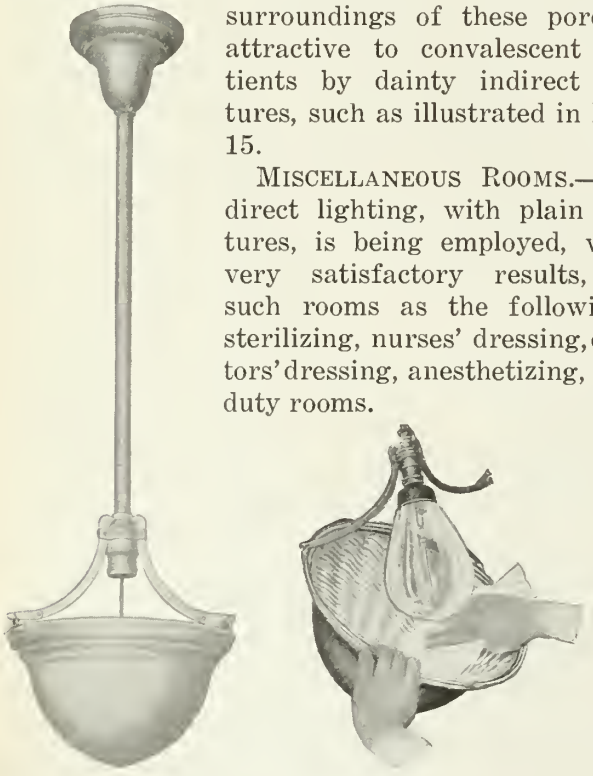


Fig. 20. Indirect fixture for corridors.

Fig. 16. Surgical dressing room in Harper Hospital, Detroit, Mich. Attention is called to the absence of glare from the glass shelves on the dressing tables, and also to the detail with which the various accessories stand out in the room. The room is 12x16 feet, with a 12-foot ceiling. Two indirect fixtures, each containing two 60-watt clear bulb tungsten lamps, each contained in indirect reflectors, suspended 24 inches from the ceiling, supply an illumination of 3.5 foot-candles, wattage per square foot being 1¼. Electrolier pull switches furnish two intensities of illumination. The fixtures are equipped with clear glass covers.

All the installations and indirect fixtures illustrated contain one-piece silvered glass reflectors (green backing), which are held in correct relationship to the lamp filament by properly designed interior equipment (Figs. 1, 18, 19, 20). The fixtures are all constructed with an idea to have them readily accessible for easy cleaning.

The cleaning question for hospital fixtures has always been one of great importance. Many hospital authorities have advocated glass covers for keeping the interior of the indirect fixtures sanitary. The Harper Hospital is one installation in

Fig. 21. For small offices.

which glass covers are being used, but I personally do not see any great necessity for using them.

At a meeting last winter of the Chicago section of the Illuminating Engineering Society a paper was read on hospital lighting at which the question of glass covers was brought up. This was discussed very thoroughly by prominent hospital authorities and doctors, the consensus of opinion being that there was no real necessity for covers being used. This is, however, largely a matter of choice, and manufacturers are equipping their fixtures with or without covers.

PART II. DIRECT LIGHTING.

The reader has possibly been impressed with the fact, after reading to this point, that present

practice demands lighting equipment that conceals the brilliant filament of the tungsten lamps from the range of vision. This condition should

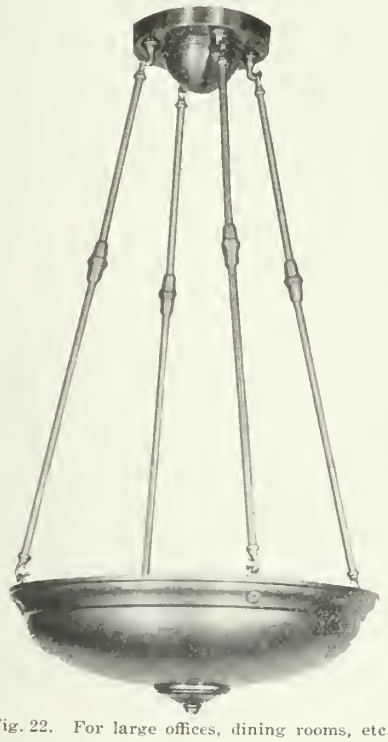


Fig. 22. For large offices, dining rooms, etc.

also exist in the following rooms, where direct lighting fixtures are generally used: kitchens (main and diet), supply rooms, bath rooms, lavatories, and all basement rooms.

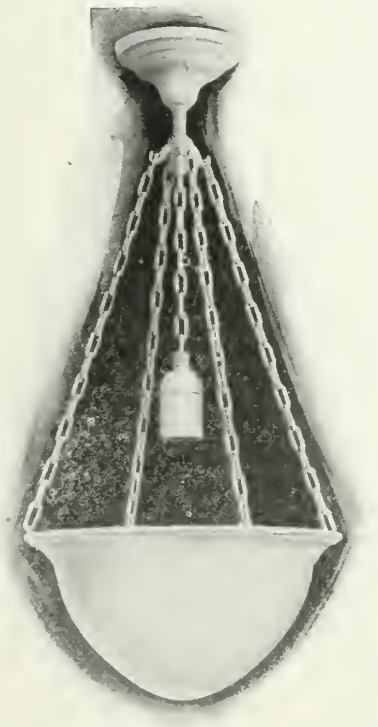


Fig. 23. Hygienic indirect fixture for operating rooms.

It will be noted from the illustration of the direct lighting equipment (Fig. 17) that the reflector is designed deep, so as to hide the lamp from the eye at practically any angle.

PART III. HOSPITAL FIXTURES.

The requirements of a suitable hospital fixture can be summed up briefly as follows: 1, the reflectors must be highly efficient; 2, the mechanical construction of the fixtures must be simple, so that cleaning can be performed in an easy manner; 3, the permanency of both reflectors and fixtures must be lasting.

In the more elaborate hospitals it is thought advisable to give the fixtures some touch of refinement and beauty, such as luminous bowl indirect fixtures, or bowls finished in light colors other than flat white.

All the fixtures illustrated are very appropriate for wards, private rooms, corridors, offices, etc.

Cockroaches as Disease Carriers.

Some tests were recently made in Manila to determine the extent to which cockroaches and red ants were carriers of Asiatic cholera organisms. The cockroaches, kept in bottles during the tests, were fed on feces containing the microorganisms. Their feces, for as long as seventy-nine hours after the last feeding, were loaded with disease germs. The point made by the Philippine Bureau of Science is that these house pests are in the habit of eating from any kind of infected matter left within their reach, and then defecating on other foods over which they may pass. The point with us in this country is that cockroaches are the bane of our hospital housekeeping, but we have been in the habit of considering them merely as a filthy nuisance. Now that we have the proof of actual government tests that they are distinct carriers of the most virulent infections, it becomes all the more necessary to get rid of them at any cost.

The Salem Hospital, Salem, Mass., suffered greatly from the fire which destroyed over $5,000,000 worth of property in that city June 25. The power house and ward buildings were destroyed, only the administration building being left. One of the most pathetic scenes of the fire came when it was decided that all patients must be removed from the hospital. Some were in a dying condition and there were women with day-old babies. Twenty-two of the patients were victims of the fire, having been brought in but a short time before. All told, there were nearly two hundred in the hospital, and all were safely transferred to other institutions in automobiles, although the last of the sick persons were carried out with the awnings and blinds of the building ablaze and through a hail of red-hot cinders. Superintendent Wilbur, head nurse Druscoll, and their assistants were aided by several cadets and policemen, as well as by a number of automobile chauffeurs, who stood by until the gasoline tanks of their machines were in danger of exploding from the intense heat. Two weeks after the fire all departments of the hospital were again in operation, several buildings in different parts of the city having been secured. The institution is now looking forward to a complete new building and a better location. The Salem Hospital was founded in 1873.

Improvements requiring the expenditure of approximately $500,000 are to be made by the Modern Woodmen of the World on their national sanatorium at Colorado Springs, Colo. The first $100,000 of the amount will be used to erect a thoroughly modern hospital equipped with an experimental laboratory.

UNITED STATES ARMY TUBERCULOSIS HOSPITAL IN NEW MEXICO.

Ideal Environment, Equable Climate, and High Order of Hygienic Treatment Place the Fort Bayard Institution in Front Rank—Patients Carefully Schooled in Self-Care.

THE United States Army General Hospital, Fort Bayard, New Mexico, is situated in the southwestern part of the state. It is on the reservation of the old military post of Fort Bayard, which was established in 1866, and was selected as a site for a tuberculosis hospital on account of its natural advantages. The reservation originally extended about four miles north and south and three miles east and west, and had an area of approximately thirteen and one-half square miles. It has been enlarged by the purchase of land to the north and by the addition, through executive order, of various tracts of public land, the object of the enlargement being the more perfect protection of the watershed and the acquisition of additional water. On the north the land rises rapidly, reaching the height of 9,000 feet at Black Peak, about eight miles from the reservation. In this direction the surface is broken by rocky hills covered with pinyon, juniper, and western yellow pine trees.

The country is picturesque, and fine views are to be had from the hills. To the south the valleys widen with vast treeless plains. Rich mineral deposits of gold, silver, copper, iron, and lead are to be found in the vicinity.

The feature which constitutes the peculiar excellence of the climate of Fort Bayard and distinguishes it from other parts of the Rocky Mountain plateau is its relative equability. The climate is such that outdoor life is pleasant throughout the year. Two factors contribute to secure this result—the altitude and the geographical position. The altitude, 6,165 feet, prevents excessive heat; the hot plains of a lower elevation, which surround on all sides the mountainous region in which Fort Bayard is situated, temper the cold winds of winter and prevent excessive cold.

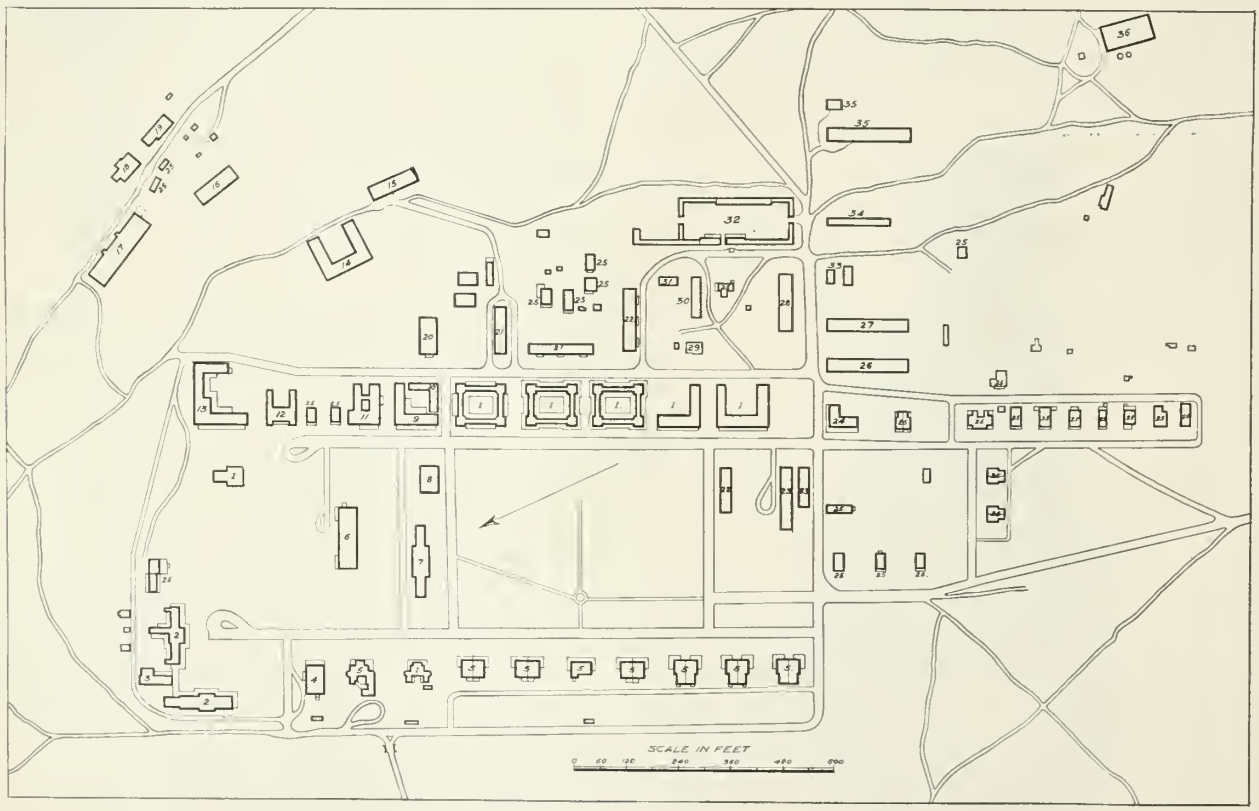


Fig. 1. United States Army Tuberculosis Hospital—General plan.

1. Wards.
2. Infirmary.
3. Mess room.
4. Laboratory.
5. Officers' quarters.
6. Officers' dormitory.
7. Administration building.
8. Solarium.
9. Library.
10. Tailor and barber.
11. Ambulant mess.
12. Post exchange.
13. Hospital corps barrack.
14. Laundry employees.
15. Laundry.
16. Coal shed.
17. Power and refrigerating plant.
18. Power house.
19. Cold storage.
20. Amusements.
21. Medical stores.
22. Quartermasters' stores.
23. Subsistence stores.
24. Guard house.
25. Quarters.
26. Stable.
27. Lumber shed.
28. Forage.
29. Bakery.
30. Carpenter and blacksmith.
31. Wheelwright.
32. Corral.
33. Stables.
34. Coal shed.
35. Hay sheds.
36. Dairy barn.

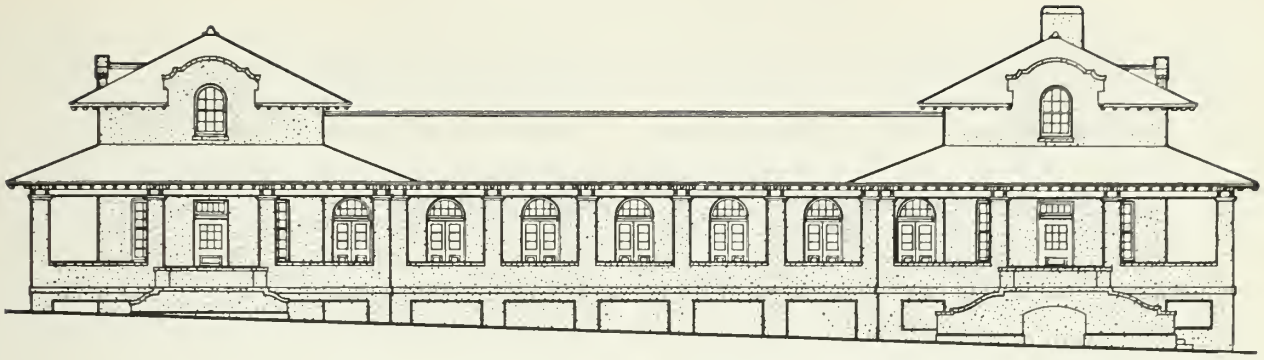


Fig. 2. United States Army Tuberculosis Hospital—Front elevation.

The following gives the number of cases treated for the years indicated:

1903	644	1908	288
1904	634	1909	300
1905	346	1910	620
1906	295	1911	624
1907	255	1912	686

Every effort has been made to make life as pleasant as possible. A stage with scenery, billiard and pool tables, an angelus, and all sorts of games have been provided. The danger of carrying infection is thoroughly understood, and each patient is provided with a cuspidor on his arrival at the station. The treatment is simply hygienic and climatic, with the treatment of intercurrent complications as they arise. All patients are required to remain out of doors during the day, except those confined to the infirmary. In inclement weather they spend their time in the solarium,

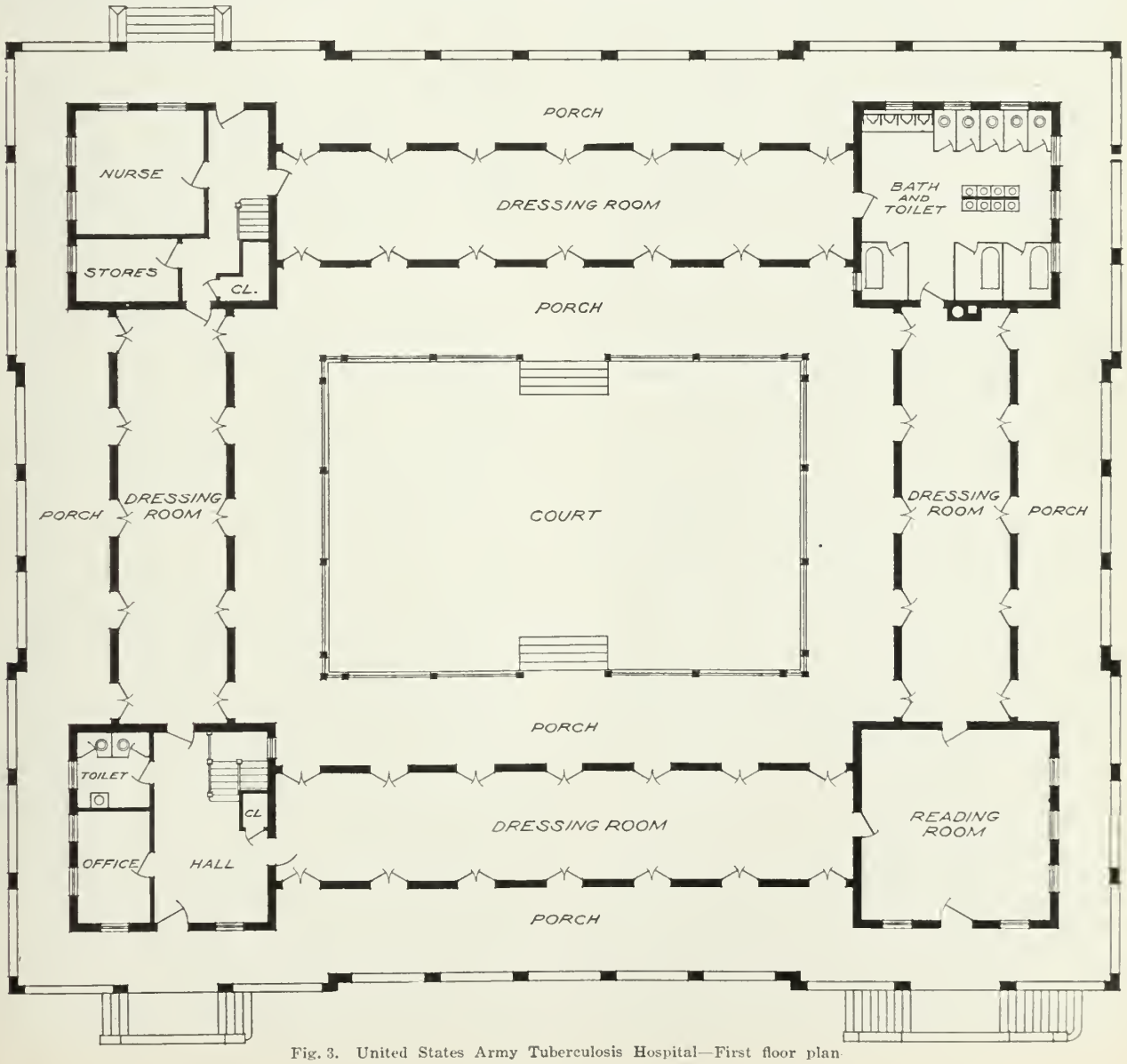


Fig. 3. United States Army Tuberculosis Hospital—First floor plan

where they are sheltered and at the same time have the benefit of the sunlight.

The patients, for purposes of treatment, are divided into four classes: (1) Convalescent, ambulant patients; these men require little or no special treatment; they are quartered in the wards and report at sick call at 9 o'clock each morning whenever the progress of their cases requires special attention. (2) Febrile, ambulant cases; these cases are taken from those of the first class or are assigned to this class for treatment at the time of admission to the hospital; cases of the first class who are shown by the weekly weight records to be losing are assigned to this class, as are also those who have fever; they are under special supervision as regards their diet and manner of life; they are required to take three hours' rest in bed each day, one hour and a half in the morning and one hour and a half in the afternoon; they are required to retire at 9 p. m. Careful record of these cases is kept and any change for the better or worse is noted. It has been found that the enforced rest, constant out-of-door life, and attention to minor details of treatment in this class of cases results, in the great majority of instances, in a quick and decided gain. The treatment is also a decided benefit to the patient in that it trains him, as can be done in no other way, to the understanding and observance of the regular hours and fundamental laws of health, without which it is impossible to achieve the best results in the treatment of pulmonary tuberculosis. (3) The third class of patients are the uncomplicated, but far advanced cases; these are assigned to quarters in a quiet and secluded building, with messing facilities handy, where they can secure special articles of diet. (4) The fourth class of patients are those who are either confined to bed or whose cases require constant supervision; they are quartered at the infirmary; it has been found desirable to keep a certain number of this class out of doors; they are given the advantage of such special diet and treatment as the condition of each individual may demand.

The patients discharged from the Fort Bayard hospital act as missionaries in the education of the general public in the all-important knowledge of hygienic mode of life and protective measures so practically learned.

Only a few of the old buildings of the Fort remain, and these have been remodeled for temporary use of the general hospital until funds can be secured to replace them with modern structures. Through the efforts of the commandant, Colonel George E. Bushnell, Medical Corps United States army, who has been in charge for about ten years, new and modern structures, with all conveniences, have been erected, the water supply has been perfected, and the sewage disposal and purification plant has been put into successful operation.

The new buildings that have been erected are: wards for ambulant patients, female nurses quarters, mess hall, solarium, store houses, crematory, infirmaries, barracks for hospital corps detachment, laboratory, sewage purification plant, officers' quarters, power and refrigeration plant, hospital corps sergeants' quarters, post exchange and bowling alleys, and administration building. The solarium is constructed almost entirely of glass, only the minimum amount of steel being used. The location is in the open, and has the benefit of the sun all day.

Figs. 1 and 2 are of a typical ward building for ambulant patients; the beds are placed on the covered porches and are protected during all kinds of weather. The dressing and all other rooms are heated by a hot-water heating plant placed in the basement under the bath and toilet rooms.

REAL COMMUNITY HEALTH SERVICE.

New York Department Publishes Summary of Activities for Past Three Months.

A summary of the health activities of the Department of Health of New York for February, March, and April has just been published in the weekly bulletin. The story makes most inspiring reading for anyone interested in public health work. Here is a partial list of things done or begun:

1. Weekly articles for the daily papers inaugurated.
2. New system of monthly requisitions for supplies in all departments installed.
3. Arrangements made to distribute laboratory products and material to other communities, under proper compensation rules.
4. Arrangements made for systematic inspection of hospitals, homes, asylums, and dispensaries, to see that they are obeying the sanitary code.
5. Inspection of all employed of the department inaugurated by way of prevention.
6. Recreation, lunch rooms, and lectures provided for employees.
7. Arrangements made for the cashing of pay checks for employees, so that they will not have to depend on outside agencies, which might not be agreeable.
8. All employees handling cash placed under bond.
9. Rearrangement of bureau expenditures made by which appropriations may be apportioned by months.
10. Circulation of weekly bulletin increased from 2,000 to 10,000 copies. The bulletin now goes to every practicing physician and to all institutions with which the department has relations.
11. Exempt positions in the department ordered advertised before appointments are made.
12. Systematic study of clinics made to reach a more orderly distribution of doctors, nurses, and material.
13. Plan of reorganization of medical staffs of communicable disease hospitals set on foot.
14. Instructions to employees in regard to their work ordered to be given in writing instead of verbally as heretofore.

15. System of inspection of roof tanks throughout the city started.

16. Rules ordered to compel the proper cleaning of drinking glasses in all public drinking places, saloons, stores, and drug stores.

17. Lodging house inspection improved and brought down to details.

18. Visits to homes of discharged patients who had had any one of the communicable diseases.

19. A study was made to determine the proportion of secondary infections following the home and hospital care of the communicable diseases. It was shown in this study that in diphtheria there were secondary infections in 13 percent of the cases treated at home and 1 percent of those treated in hospitals. Similar rates were maintained in Scotch fever and measles.

20. Eighty thousand circulars were printed for distribution among school children, containing advice regarding contagious diseases.

21. A system of study organized to extend knowledge of administrative methods for public health officers.

22. Systematic post-graduate work ordered for all medical staff members of public hospitals.

In addition to these lines of activity, some of the other items of progress were: voluntary publicity work extended; study ordered of children's working papers; a committee appointed to pass on specifications for drugs and chemicals; study of a pension service for the department ordered; cooperation with the police department ordered extended; river bathing regulated; rules made for day nurseries; official representation at conventions arranged; uniform system of hospital accounting ordered; arrangements made for opposing objectionable legislation; study of city stables inaugurated; state inspection of dairies ordered.

CHEAP SOAPS COST TOO MUCH.

Relative Values of Pure Soaps and Those That Are Filled or Adulterated.

Soap is a definite chemical combination. The combining of tallow, grease, or any vegetable oil with potassa or sodium alkali by the process of saponification changes the oil to a fatty acid and the alkali to an oxid (combined alkali). When it has a slight alkaline reaction and possesses the required percentage of moisture, it is a pure soap.

To judge the money value of pure soap, add the percentage of fatty acids and oxid together, which is the only part of the soap that has soap-cleansing power. There must be in pure soap a small percentage of free alkaline neutral salts, sufficient to take care of hard water, as otherwise the oxid or combined alkali must do the work before the soap will produce its cleansing properties.

Two soaps of the same intrinsic value of combined fatty acid and oxid may have a difference of 10 to 15 percent of cleansing value because one of the soaps lacks the element that takes care of hard water.

Soap making is one of the oldest industries. Every live and up-to-date soap plant knows how to "fill the soap" to meet the demand of a cheaper priced soap, bringing up the weight, volume, and bulk to the desired consistency, but they do not all do it. There are many kinds of adulterants used, and all of them take more or less moisture and free alkali to hold them properly combined in the soap. Dry soap powder does not require moisture, but there is now a new process by which a soap powder may contain 35 percent of moisture and appear perfectly dry. That there is nothing new in the soap business except the "filler" is a trite expression.

The soft potassa soaps, like the P. & S. green oil soap, are the best soaps for use in cleaning painted and varnished surfaces, walls, furniture, and woolens. The sodium oxid soap will have a dulling effect on a varnished surface much quicker than a potassium oxid soap; in fact, a potassa soap, when perfectly made, showing the proper alkaline reaction and free of adulterants, can be used thousands of times without killing the varnish.

RELATIVE MONEY VALUE OF SOFT POTASH SOAPS.

Take, for instance, this illustration: "Smith's soap" costs 5½ cents per pound, and "Smythe's soap" costs 4½ cents per pound. On analyzing, we find that Smith's soap contains 63 percent of true cleansing power or soap, and Smythe's soap contains 45 percent of cleansing power. Dividing 45 by 63 and multiplying by 100, we get 71½ percent, the percentage value that Smythe's cheap soap is compared with Smith's soap. Taking this percentage of 5½ cents, we find that Smythe's 4½-cent soap should cost only 3.9 cents per pound because of the small amount of real cleansing power that is in it. Taking another view point, Smith's soap is costing 5½ cents per pound, or $5.50 per 100 pounds. In Smith's soap there are 63 pounds of true soap. Then the true soap will cost $5.50 divided by 63, or $8.70 per 100 pounds. Smythe's soap is costing 4½ cents per pound, or $4.50 per 100 pounds, and contains only 45 percent of real soap. Then the actual soap in the cheap soap will cost $4.50 divided by 45, or $10 per 100 pounds. Here it is proved that the true cleansing power (the thing desired) can be obtained for less money by buying the more expensive soft soap.

This comparative test of values is based on the assumption that the dealer or manufacturer of the low-priced soap is strictly honest and not adding a profit to the moisture that must go with the filler, but adding only the excess cost of barrel, freight, cartage, and the labor to hold and carry the filler. If the dealer tacks on a profit to the above items of expense, the low-priced soap is indeed an expensive purchase. Here is a glaring exposition that shows the fallacy of trying to save money by purchasing a low-priced soft soap:

Cost of 5 pounds all pure soap at 6 cents (in bulk)	30	cents
Cost of pail to hold the soap	9	cents
Cost of crate (12 in crate), per pail	3½	cents
Cost of cartage and freight (average)	2	cents
Cost of labor (make ready, filling, packing, etc.)	1½	cents
Total (dealer's profits and overhead charges omitted)	46	cents
Cost of 5 pounds of cheap soap at 4 cents (in bulk)	20	cents
Cost of pail to hold the soap	9	cents
Cost of crate (12 in crate), per pail	3½	cents
Cost of cartage and freight (average)	2	cents
Cost of labor (make ready, filling, packing, etc.)	1½	cents
Total (dealer's profits and overhead charges omitted)	36	cents

In each case the cost of labor and package to hold the 5 pounds is the same—16 cents. Over 44 percent of the cheap soap is "pail" and only 34 percent of the pure soap is "pail." The cheap 4-cent soap must, of necessity, be a heavy filled soap, and, at the most, have a soap value of only 75 percent of the cost. Here it is 15 cents real soap and 21 cents filler and pail. In barrel quantities there is an excess cost on account of the filler, and, at the best purchase, the cheap 4-cent soap will cost 7 cents per pound for the real soap content.

The MODERN HOSPITAL

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Contributors, subscribers, and readers will find important information on advertising page 26.

Plea for a Constructive Pan-American Quarantine.

If there is to be a close social, political, and commercial union between the states of North, Central, and South America and the West Indies, as all the signs of the times promise, and toward the accomplishment of which powerful influences are at work, there is one important, indeed absolutely necessary, step to be taken—namely, the settlement of the quarantine question.

Mr. President Wilson may exercise a more than Job-like patience in his efforts toward harmony to gain the friendship and confidence of Latin America, suave diplomats may mediate, and all the people of the New World may yearn for a real, working brotherhood among themselves, until doomsday, but unless there shall be established a constructive quarantine, that will encourage and direct uninterrupted intercourse, no matter how many or how serious epidemics of communicable diseases there may be, all other efforts must fail.

In the days before we knew the cause, course, and pathology of the communicable diseases, the best quarantine officer of any country or port was he who could raise and maintain the highest, strongest, and most formidably "hog-high" barrier against intercourse of any kind with an afflicted, helpless, and needy neighboring state or port. That time, thanks to our present-day scientific knowledge, as well as our humanitarianism and common sense, has gone by, and we know now that scientific quarantine contemplates the largest possible measure of uninterrupted intercourse, the freest possible interchange of commodities, the greatest measure of helpfulness to the afflicted people, and at the same time the employment of the most highly developed methods of prevention of the spread of the disease.

Unfortunately, we have not been cured of our habit of panic in the face of a danger, and if there is any one thing more dangerous than the danger itself, it is the blind, unreasoning panic that accompanies it. In the case of an epidemic this habit of panic takes the form of a declaration of quarantine long before it is definitely determined that such a course is necessary. We go on the principle that it is best to tie up everything first, and make a proper inquiry afterward to determine whether there was really something to be frightened about. That principle is all right if we believe that "self-preservation is the first law of nature"; but there is a pretty general feeling abroad nowadays that we owe our brother something, even at the price of a little risk to ourselves.

Is it generally known that a declaration of quarantine against a South or Central American port very often means financial ruin of the country dependent on it? And is it generally known that very many of these quarantines are false alarms, and that the dreaded disease was not present at all, or, if present, was also present in quite as aggravated form in the ports which cut off communication? And is it generally appreciated that a little intelligent cooperation with the afflicted people would have stamped out the trouble in its incipiency, before it got to be a menace? A case in point: three cases of plague developed in New Orleans within the month; the surgeon-general of the public health service was on the ground and at work before the public knew about the cases. If those cases had occurred in a Venezuelan port, quarantine regulations would have closed the door of every other port in the world against the already afflicted people, and it would take years for them to recover, although not another case of the disease were to develop.

Then, why not go about this quarantine business in an orderly fashion, and as though all the people in this hemisphere were indeed fellow human beings entitled to thoughtful consideration—one of another?

How would it do to create by governmental initiative an international quarantine commission, with a representative from each independent state, nation, and island? This commission would operate something like our own interstate commerce commission; it would have an expert in

diagnosis of the quarantinable diseases in every port on the American continent. A school would be maintained for the training of these experts, or arrangements would be made for that purpose with existing schools. No expert would be qualified for appointment except after a thorough examination. Under such a scheme each port or country participating would send, say, two men from each port to be examined, and, if not qualified, to be trained—trained not only in diagnosis and treatment of these special diseases, but schooled in the prescribed methods of procedure in case of an outbreak. It would take perhaps a year or two to create a chain of experts competent to handle any situation. The commission would have its permanent headquarters at some central or desirable point, and the moment its expert reported by wire the presence of an outbreak, or threat of an outbreak, anywhere, it would take charge of the situation, direct a comprehensive program, and send proper help if necessary.

In such a system every country would want to participate, because failure to do so would render it liable to the infliction of the outrageous quarantine regulations that now operate against all.

Costly? Certainly, but not 1 percent as costly as the present financially ruinous and humanly ruthless system.

JOHN A. HORNSBY.

State Registration of Nurses.

The movement to register nurses in various states has followed very closely a similar movement twenty years ago to procure the examination and registration of physicians in the United States. At that time the effort to register physicians was regarded as futile and not destined to have any permanent value. It has, however, done more to promote medical research and study, and the reorganization of medical education, than any other similar movement during the past century. A similar benefit promises to follow the effort which began in 1903 in a similar way to register trained nurses and to give them a certain standing before the public. Much, in fact, has already been accomplished for the betterment of the training of nurses and their protection in nursing by this movement. At the present time thirty-nine states have more or less perfect laws governing the registration of nurses. In eight of these states such registration is compulsory, and no nurse is allowed the privileges of a trained nurse without passing an examination and receiving the indorsement of the state board. In the remaining thirty-one states the law is permissive, and the registration of nurses assures certain privileges and opportunities which do not come to those who have been unwilling to have their qualifications tested by an examining board, and proper scrutiny into their antecedents and method of education. It does not require a prophet to predict that the time is not far distant when all states will have registration laws governing the practice of medicine and no less the practice of nursing. It is consequently well to consider what ought to be done now to perfect methods of examining, testing, and licensing women to practice the profession of nursing. It would seem desirable to make examinations and licenses compulsory in each state, in order to protect the public from incompetent and inefficient nurses, such as graduate from small special private hospitals or correspondence schools, and who may not possess the general practical training which constitutes the trained nurse. To this end the existing laws must be strengthened and enforced. There must also be standards of preliminary education, the establishment of proper age, and guarantees of proper home training. Following this, there must be some assurance when a nurse is known as a registered nurse that she has had the requisite training in various branches of nursing, and has profited by her opportunities. Once approved by a state examining board and allowed to write herself down as a registered nurse, the state owes it to her to protect her in her rights and not subject her to the competition of half-educated, untrained, and incompetent women who may be turned out by commercial hospitals and correspondence schools.

As a logical result of such training and preparation of competent women, there should also be a general movement to supplement this higher educational work by providing training for attendants on the sick, and for educating, training, and supervising male and female attendants on the sick of the type of the hospital orderly, and also for the training of nursery maids. To these should be given an assured position in the training system of each state, and their work should be organized, supervised, and improved.

HENRY M. HURD, M. D.

Scope of Annual Reports.

This is the time of year to think about annual reports. It is conceded that most annual reports are not what they should be. Why, and in what respect, do they fall short?

When one sets out to write a letter, he first thinks about the person to whom he is going to write; if it is a child, it is not likely that a verbose and technical essay will be written; if it is an uneducated person, a philosophical argument will not be entered upon. Why, when we think about get-

ting up an annual report, do we not think about the people for whom it is intended?

Most of our annual reports are intended to reach persons who are interested, or whom it is intended to interest, in the institution; but they are not medical persons. Then, why put into the report a mass of information about the number of the various diseases treated, the number of surgical operations performed—using always the technical nomenclature, which will not be of the slightest interest to those for whom the report is intended. Medical reports of hospitals are fine, and they have a distinct value, but they should be published, if published at all, separately, for distribution among medical men. There are so many interesting things about hospitals which the lay public would like to know, and knowledge of which should be strong "pulling cards" for gifts of money and other things that may be badly needed.

Here are a few headings that might be used for topics to take up in the report:

Improvements in methods during the year.

Improvements in architecture and in equipment.

Changes necessary to be made in architecture, equipment, and operating methods during the coming year—or the near future; and tell why.

Which services have grown most during the year—and tell why.

What events have been notable during the year? This should be an inspiring story of gifts to the hospital, told not in figures merely, but get the sentiment of each donation and make the most of it for its effect on others who might be moved to do likewise. Into this part of the story can be injected all sorts of interesting happenings, such as a great number of babies born, parties and presents for the sick children, visits by young ladies' clubs or societies for the entertainment of the sick, parties for the pupil nurses, with human interest touches about all these events.

Out-patient service. Don't stop at figures; get some sentiment into this part of the story; tell of some specific good things your visiting nurses did; don't be afraid to exercise a little imagination—not in exaggeration or untruthfulness, but you can expand on the sentiment of mother help, child welfare; tell about the wage winners your doctors and nurses got back to work.

Can't you superintendents see that if you get the right kind of material into your reports, they will be read and talked about, and that they will awaken a lively and profitable interest in those whom you desire to reach? Leave out the number of nephrectomies and arteriosclerosis cases you had, and play up the human interest side of your hospital—it will pay, and pay big.

Dr. Rupert Norton.

Rupert Norton, M. D., was born July 21, 1867, and died June 19, 1914. The sudden death of Dr. Rupert Norton, of the Johns Hopkins Hospital, from typhoid fever has deprived the growing medical specialty of hospital administration of the services of one who had received an unusual training for his chosen work, and who possessed exceptional qualities of mind and heart. A native of Cambridge, Mass., and a son of the late Prof. Charles Eliot Norton, who had been the trusted friend and companion of Thomas Carlyle, John Ruskin, Leslie Stephen, Ralph Waldo Emerson, James Russell Lowell, and many other equally eminent men at home and abroad, his early life had been spent among scholarly and thoughtful people, from whom he derived high ideals of duty and service. He graduated from Harvard University in 1888, later studied medicine in Germany and Boston, and received the Degree of Doctor of Medicine in 1893. After service in a children's hospital in Boston he was appointed an assistant in medicine at the Johns Hopkins Hospital in the latter part of the same year. After a faithful service there of nearly two years he resigned, and established himself in medical practice in Washington, D. C. At the breaking out of the Spanish-American War in 1898 he tendered his services to the Government and was appointed to a laboratory in connection with one of the large southern camps, where he did valuable pathological work until the close of the brief war.

Later he was appointed a medical officer of the New York Mutual Life Insurance Company in Paris, where he remained until 1906, when, owing to unfriendly legislation at home, the company discontinued its active work in France. Shortly after, at the suggestion of Dr. Osler, he became acting superintendent of the Johns Hopkins Hospital during the prolonged vacation of the superintendent, and later remained as assistant superintendent on the creation of that office in 1907, holding the position during the past seven years. In addition to administrative duties of an active character, he had sole charge of the editorial work of the Johns Hopkins Bulletin and of the Reports, and more recently of a series of medical monographs. His accurate and painstaking scholarship is to be seen in all of these publications. He possessed a well-trained mind and a discriminating, critical faculty, and thought lightly of the labor of examining manuscripts and the drudgery of constant proofreading if by this labor he could raise the standard of medical publications and increase their influence on medical education. None but those who have toiled in a similar capacity can appreciate the irksome character of his occupation

thus carried on faithfully in the spare moments snatched from absorbing administrative duties.

His untimely death is a sore loss to an important branch of medical literature. His published writings, although few, were on topics connected with medical education or hospital management, and were marked by clearness of thought, sincerity, and frankness of expression. For many years also the "Notes on New Books" in the Bulletin of the Johns Hopkins Hospital were largely written by him and showed him to be a conscientious and discriminating reviewer.

He was the soul of honor, honesty, and uprightness, with high ideals of personal service. He was warmly interested in the social service of the hospital, and gave much thought and time to it. He was kind to the poor and generous to those who needed aid or charitable consideration. He was a loyal and devoted friend, and, although by nature modest and reserved, the honor and reputation of a friend was as cherished as his own. Prof. Thayer, his life-long friend, has well said of him: "When we look back on his career, we shall remember his simplicity, his modesty, his upright, uncompromising honesty of purpose and word and practice, his delicate charm of mind, his varied attainments, interests, and abilities, his faithful work in many capacities, but, above all, we shall remember the rare beauty of his friendship."

HENRY M. HURD.

Convalescent Labor in General Hospitals.

In a recent number of THE MODERN HOSPITAL appeared an article setting forth the "Value of Convalescent Labor in Hospital Work." The author states that the use of convalescent patients as hospital helpers should be a routine procedure, that it would increase the efficiency of the hospital, would be of great value to the patients, and furnish a test of the head nurse's ability.

It seems that there might well be a difference of opinion on this subject. The use of convalescent labor is nothing new. It has been the practice in many municipal and state hospitals. That it is desirable in hospitals for the insane, tuberculosis sanatoriums, and other special institutions is probably true, but as a procedure for general hospitals, whether municipal or private corporations, it is in the opinion of the writer very questionable.

Surely there are other and better ways of testing the abilities of the head nurses. As to the value of this work to the patients themselves, it is not clear how they would be benefited; not financially, for it is not proposed that they be paid, and surely not by learning an occupation for future use.

Whether this method would increase the efficiency of the hospital would depend on the standard of the hospital. If, as in many municipal hospitals, it is impossible to get a sufficient number of paid helpers to do the work properly, then undoubtedly the assistance of convalescent patients would be valuable, but it should be as a last resort—not as a routine procedure.

The majority of patients in a general hospital who are physically able to do such work should either be sent home or to a convalescent hospital. The modern general hospital is a very expensive plant, and is usually none too large to meet the legitimate demands made on it. To use the beds of such a plant for convalescent helpers would not be good business, look at it how you will. In the opinion of the writer it always has been and is likely to continue to be a pernicious system, with nothing to recommend it.

On the other hand, there are very real problems with regard to convalescent patients—namely, to find accommodations for those patients in convalescent hospitals, and, more important still, that of occupational training for those who are permanently handicapped, both for patients discharged from the wards and those applying to the outpatient department.

Dr. Hall, of Marblehead, has been very successful in his institution, and presented a very interesting paper on the subject of occupations, which appeared in an earlier number of THE MODERN HOSPITAL. The Massachusetts General Hospital has, I believe, made an effort to partially solve the problem for its patients by the establishment of a pottery.

This question presents itself: Is it a problem for any one institution? If the need exists for the patients of one general hospital, is it not equally necessary in relative proportion for the patients of every hospital of a similar type in that community? Would it not mean much reduplication of effort if each hospital attempted to do its own work in this respect? Such would seem to be the case, and that the proper solution would be to establish an institution for occupational instruction for the physically handicapped. To this institution could be referred selected patients from any hospital in the community, to be taught some useful occupation adapted to the physical condition of the patient. It would seem that such an institution is almost as essential as a hospital—in fact, is necessary to complete the hospital system of every large community. Such efforts as are being made by individual institutions are most praiseworthy and will demonstrate many good points aside from benefiting their own patients.

Occupational training for the physically handicapped is one of the real problems of the future,

and it should be met in a manner to best serve the general need. Should each institution attempt to provide for its own patients in this respect, or will an institution large enough and broad enough in its scope to meet the demand of the various hospitals in the community prove the proper solution?

WINFORD SMITH.

Announcements.

Beginning in the September number, there is to be a series of eight or more papers on the general subject of "Feeding the Hospital," by Miss Lulu Graves, dietitian for the Cook County Hospitals, Chicago.

These papers will discuss the whole problem of food—the selection and purchase, the storage and care, and the preparation of foods; making out the menus for sick and well; the economical problems involved in the feeding of all classes in the institution, in order to make food supplies go the farthest and serve the greatest number of purposes from meal to meal. Miss Graves will take up also the serving of meals, both in small and large hospitals, so that they shall be presented to patients in the most appetizing and attractive style. She will discuss the menus for the various classes of patients, sick children, maternity women, fever patients, and surgical cases. She will go sufficiently into the chemistry of foods, and the physiology of digestion to greatly aid her readers in the selection of foods for the various classes of patients and well people at different seasons of the year and under varying market conditions.

Food costs and methods for determining the cost of meals in various size hospitals will be emphasized in some of the papers. Miss Graves will also discuss the determination, selection, preparation, and methods of measuring scientific special diets to meet the requirements of exacting physicians in the feeding of patients whose metabolism must be studied.

It is with the greatest satisfaction that we are enabled to announce this series of papers. Miss Graves has had large experience in hospital dietetics, for some years as head dietitian in Michael Reese Hospital, Chicago, and before that in domestic science work. She has worked beside some of the best clinicians in this country, studying their cases with them, and participating in their work in metabolism. She has also had large experience in kitchen management. Altogether, she should give us a series of papers that will mark an epoch in the science and practice of "Feeding the Hospital."

With the September number also will begin a veritable rain of practical papers on the everyday problems of small hospitals. These papers are in course of preparation by practical people, selected for their various topics by reason of successful achievement in their several fields. Some small hospitals are successful in one direction and some in another because of the peculiar talents of their superintendents. It is proposed to assemble the successes and the talents of many of these workers for the benefit of all.

These papers should be of the greatest benefit to the superintendents, trustees, and workers in small hospitals, while they should have distinct value for those interested in the larger institutions.

Dr. Fisher's Retirement.

Announcement of the retirement of Dr. C. Irving Fisher on July 1, after a continued service of twenty-three years as superintendent of the Presbyterian Hospital, New York, must bring to all his great host of friends mingled feelings of regret and pleasure—regret that we are to lose the benefits of his ripe experience, the encouragement of his ever-boyish enthusiasm and the ever-present spirit of his leadership in all the things that have spelled hospital progress and efficiency; pleasure must come to us to know that the heavy burden of responsibility that he has borne so long is to be lifted from his shoulders, and that his journey down the sunset side of life will be free and easy.

Hospital people the world over have come to look to the Presbyterian Hospital for the best there is in methods and purpose; its leadership has been safe and sound for these many years; its trustees have changed many times; its devoted supporters have come and gone, but always as true as the needle to the pole the fine old institution has gone on its way, high and ever higher —and we know where the real leadership was.

A word or two about the mile posts that Dr. Fisher has passed in his busy life may not be amiss on this, the occasion of his retirement:

He was graduated at the State Normal School of Massachusetts in 1866; taught school for three years; graduated from Harvard Medical School in 1870; was assistant port physician for the port of Boston from 1871 to 1875; engaged in private practice from 1875 to 1883; was superintendent of Massachusetts State Infirmary at Tewksbury from 1883 to 1891, when he entered the Presbyterian Hospital as superintendent.

This is not goodby to Dr. Fisher; it is godspeed on a pleasure journey of rest and recreation after a long devotion to the highest of duties, brilliantly performed. We hope still to have with us

his genial, courageous presence at our meetings, his wise counsel in our deliberations, and the beneficence of his hopefulness in all that concerns our profession.

"Economy" Fills a Hospital.

This is what the Kansas City *Star* found to be the result of the methods of the present political administration of Kansas City, where an efficient superintendent's resignation was recently demanded in order that the bars might be let down for the faithful:

"The increase in the number of infectious diseases since the city discharged its physicians to save money was shown today when it became known that the isolation wards at the General Hospital were full of persons afflicted with small-pox, diphtheria, and other contagious diseases. There were 280 persons at the General Hospital yesterday, 56 of whom were small-pox patients. Other infectious diseases are there in corresponding numbers as the direct result of the cutting off of the city's health inspectors.

"Formerly, with the city physicians making regular inspections the number of small-pox patients rarely went above 12 or 13.

"Here is how the boss administration saves (?) the taxpayers' money. The increase in food supplies for March over February, 1914, are as follows: milk, 260 gallons; bread, 678 pounds; butter, 47 pounds; sugar, 106 pounds; eggs, 95 dozen. Physicians at the General Hospital admitted this morning that this increase was caused by the large number of patients cared for who are suffering from infectious diseases.

" 'The city is full of it,' one physician said. 'This morning I was asked to go out to a certain home for children and vaccinate the patients there. The children are suffering from both small-pox and diphtheria. Two of them were brought here last night, and I don't know what to do with them. One has been exposed to small-pox and now has diphtheria. The other has diphtheria and has been exposed to small-pox. The only thing I can do is to vaccinate against both diseases.' "

Stop! Look! Listen!

The modern hospital is the product of thought; it has not been projected into existence as the result of an explosion. Its parts, when set up as a concrete whole, form a monument to a vast number of constructive intellectual achievements.

But it is a moving, working machine, turning out the most valuable product in the world—health. It cannot run long of its own momentum; just as an engineer sits quietly at his throttle, impelling action in his machine by skillful and scientific handling, so that infinitely more delicate mechanism, the modern hospital, must be guided and impelled forward by a trained mind and hand and eye. It cannot be hurled along by brute force; it is not by eighteen hours a day of anxious, feverish energy that the best hospital is run. Therefore there should be quiet moments for every hospital administrator; he should take time to look backward over the road he has come in order that he may profit by the experience in planning for the future journey.

Some one has said that "every day is a critical time—it connects the past with the future," so the close of each hospital day means much if we but take proper account of it. So again we say, Stop! Look! Listen!

A Study of the Services.

An effort is being made to ascertain the proportion of beds of the various services in a large number of general hospitals. The information will be serviceable to every institution.

It is therefore earnestly requested that the superintendent of every general hospital, large and small, will furnish the information requested below and mail it to THE MODERN HOSPITAL, No. 6 North Michigan Avenue, Chicago. Won't each one kindly do this at once?

As soon as the answers are received the summaries will be published, with some conclusions based on them. If each one helps, the data obtained will be very valuable.

DIVISION OF THE SERVICES.

1. Name of hospital.....
2. Address .....
3. How many beds? { Pay..... / Nominal amount pay..... / Free..... / Total..... }
4. Medical..... 5. Surgical.....
6. Obstetrical..... 7. Nose and throat.....
8. Eye..... 9. Orthopedic.....
10. Skin..... 11. Genitourinary.....
12. Neurological..... 13. Tuberculosis.....
14. Isolation .....
15. If pay patients are not divided into services, please state that fact, and include in above schedule only the free beds .....
16. Do you think this proportion ideal? If not, please give your opinion of an ideal proportion.....
17. Has the capacity of your institution been increased recently? .....
18. Is any increase contemplated in the immediate future? .....
19. Name of superintendent.....

Dr. Van Norman's Paper.

Last month announcement was made that the series of papers under the direction of Dr. Winford Smith had come to a close. Fortunately for our readers, that was an error, because we had one more—that by Dr. Van Norman—published elsewhere, on "Ward Waste and What Is Done With It." This is one of the best papers of the whole series. So-called "ward waste" is not always waste, as Dr. Van Norman shows; there is often

salvage there if there is always a check. If a worker knows that there is someone behind her to see whether she has thrown away something that was worth saving, or has broken and thrown away something that should not have been broken, she will be more careful. If Dr. Van Norman's paper did nothing more than point out a method to stop this one leak, it is valuable. But the paper is important for many thoughts on the handling of waste.

Fire! Fire!! Fire!!!

How many hospitals have bettered their fire protection since THE MODERN HOSPITAL urged the matter for attention sixty days ago? If you haven't done anything else, have you looked up the date when your extinguishers were charged, and had them attended to if they needed it? Better also examine your hose to see if the fabric is rotted where it touches the metal connections and nozzle.

Don't forget that sick people are helpless, and they depend on you for their safety—from fire as well as from dangers of infection.

How many trustees inquired about a fire apparatus under the spur of THE MODERN HOSPITAL, then dropped the matter when they got the prices?

How many superintendents and trustees can honestly say they are doing the best they can for the safety of their helpless sick?

The Items In Hospital Efficiency.

Dr. Hornsby's paper for this month on the nursing of patients has been unavoidably crowded out. It will appear in the September number.

This paper deals with the specific duties of pupil nurses in the several services in the hospital, points out the technical training they will require, attempts to measure the preliminary education necessary for the purpose, and suggests the extent to which physicians may expect the nurses to render intelligent help in the conduct of cases of various kinds.

Our August Cover Illustration.

Our cover illustration for this month is from the architect's drawing of the new hospital of the House of Calvary, to be erected at One Hundred and Seventy-sixth street and Mount Hope avenue, Borough of the Bronx, New York City, the needs of the institution having outgrown the building occupied for many years on Perry street in the same city. The mission of the hospital will be, as in the past, the treatment of persons suffering from cancer, devoting its activities to the care of those afflicted with the disease rather than to research as to its causes and cure.

ORGANIZED EFFORT TO AID THE INSANE.

"A Mind That Found Itself" Inspired the Formation of the National Association for Mental Hygiene—Constructive Cooperation Planned Under Dr. Thomas W. Salmon—Many Societies Now at Work.

BY OUR NEW YORK CORRESPONDENT.

It is extremely gratifying to note that in the broad health problems confronting us today there is an increasing tendency toward better organization and the formation of "national committees" to cooperate with and aid the endless chain of state and local societies.

On January 1, 1910, the date of the last Federal census, the number of persons in institutions for the insane in the United States was 187,454. This is an appalling figure, but we must also face the disgraceful fact that insane persons can still be found in most states in "almshouses," in some states in "prisons," in many states receiving only "custodial care." The cost of maintaining 187,454 people in institutions for the year 1910 was $32,804,450. What is the economic loss to the United States? The average annual value to the community of an adult between 18 and 45 is $700, if we credit the statement of the United States commissioner of labor. The annual economic loss through confinement in these institutions, estimated on this basis, would be $130,000,000; add this to the annual cost of maintenance, and we have a total of $162,000,000.

We are a commercial nation, and some of us wish to know what is being accomplished with a problem involving a greater annual cost than has been spent annually on the building of the Panama Canal. Others, knowing that approximately 30,000 new cases of mental disease are admitted yearly to institutions in the United States, and that the annual increase in number of patients under treatment is nearly 6,000, are interested from a purely humanitarian standpoint.

For more than thirty years the need of some national agency had been urgent to help protect the mental health of the public, raise the standards of care and treatment of the insane, and work toward prevention of nervous and mental disorders. Many of our physicians, with experience in psychiatry, have long felt this need, but real effort toward the realization of their dreams was pioneered by a layman, Mr. Clifford W. Beer, whose name should go down to posterity with Philippe Pinel, Benjamin Rush, Dorothea Dix, and Wilhelm Greisinger.

Mr. Beer was a patient in various private and public institutions for the insane from 1900 until 1904, and in 1908 published "A Mind That Found Itself." This book, a graphic picture of his personal experiences and sufferings during his illness, did much to aid his untiring efforts in procuring the cooperation of representative men and women throughout the United States in a national movement for mental hygiene. On May 6, 1908, the first independent society "to work for the conservation of mental health, and to raise the standards of care for those in danger of developing mental disorder or actually insane," was organized at New Haven. This society was established to serve as a model for other state organizations, and in February, 1909, the National Committee for Mental Hygiene came into being, with Mr. Beers as secretary.

The following list of societies, in the order of their origin, is tangible evidence of activities in this field, and the national committee, although not in every case directly instrumental in their organization, is in close touch and cooperation with them all.

The Illinois Society for Mental Hygiene, organized July,

1909; the Committee on Mental Hygiene of the State Charities' Aid Association of New York, organized May, 1910, an outgrowth of the After-Care Committee, organized January, 1906; the Committee on Mental Hygiene of the New Jersey State Sanitary Association, appointed December, 1912; the Massachusetts Society for Mental Hygiene, organized January, 1913; the Mental Hygiene Committee of the Maryland Psychiatric Society, so named in February, 1912, an outgrowth of the After-Care Committee, organized in 1911; the Committee on Mental Hygiene of the Public Charities Association of Pennsylvania, organized in March, 1913; the Committee on Mental Hygiene of the Texas Conference of Charities and Correction, appointed 1913; the Mental Hygiene Committee of the Canadian Medical Society, organized 1913; the South African Committee on Mental Hygiene, organized 1913; the Committee on Mental Hygiene of the United Charities Association of Dalias, Texas, appointed 1913; the North Carolina Society for Mental Hygiene, organized December, 1913; the Dayton (Ohio) Mental Hygiene Committee, organized March, 1914.

More active work was made possible for the national committee in 1912 by a gift of $55,000, and Dr. Thomas W. Salmon, of the United States Public Health Service, was at once given special leave of absence to act as "director of special studies." The Government has extended this special leave, and a fifteen-minute chat with Dr. Salman leaves no doubt in one's mind either as to the startling gravity of this problem or that real results are being obtained. A summary of laws giving a clear idea of the provisions for the care and commitment of the insane in the several states has been prepared by Mr. John Koren, of the United States Census Bureau. A complete list of institutions for the insane has been made, and information regarding systems of care, reports, records of personal inspection, etc., are filed in accordance with a system which is capable of indefinite expansion. A vast amount of other information regarding boards of control, movements for better care, legislation relating to appropriations, new institutions, etc., and psychiatric clinics, wards, and pavilions in connection with general hospitals, is now available at the committee headquarters, 50 Union Square, New York City.

In September and October, 1913, Dr. Salmon spent five weeks in Wisconsin, and through the courtesy of the president of the board of control made a thorough study of the "Wisconsin System" of caring for the insane. He went into the operation of the system as a whole, especially administrative and financial, and visited eighteen institutions. His detailed report has not as yet been completed, but the Wisconsin Board of Control has adopted definite plans for improvement in care suggested by him. Another outcome of this personal survey has been the appointment of a chair of psychiatry at the University of Wisconsin.

The national committee has been extremely fortunate in securing the services of Dr. Salmon, a physician not only experienced in psychiatry and preventive medicine, but possessing remarkable administrative ability.

A detailed plan for a complete survey of all our institutions for the care of the insane by physicians with special training in psychiatry, under the supervision of a responsible board of experts, has been outlined. This work Dr. Salmon hopes to complete in two years at a possible cost of $50,000. He is also using every effort to bring the Rockefeller Foundation into permanent cooperation with the national committee, not solely because of neglected opportunities for philanthropy—construction of new hospitals, convalescent homes, nurses' training schools, etc.—but to aid in raising the standards of work in mental hygiene and research in the many fields of psychiatry.

The National Committee for Mental Hygiene and its affiliated state and local societies, working in close cooperation with the Rockefeller Foundation and aided by the Government through its public health service, are certain of immense returns in this, perhaps the greatest, field of endeavor toward a more sane, efficient, and happy nation.

LETTERS TO THE EDITOR

The Dentist in the Hospital.

To the Editor of THE MODERN HOSPITAL:

That the dentist is a very important factor in the cause of preventive medicine, we are late to realize. The subject of sepsis is not given the importance it should have in our hands. Can we not do some educational work in our hospitals? I think we can. Hence I suggest this plan for all hospital wards: see that the patient is provided with a tooth brush—if he cannot furnish it, give it to him—which he is told to use, and see that he does use it after meals; or, if this is not possible, after breakfast and before going to bed. This is more important than rubbing the patient's back, which requires the attention of a nurse. Once begun, the habit will continue. Again, if a patient's eyes require refracting, he is sent to the staff oculist. Does the inspection of the teeth form as important a part of the routine examination of a patint as that of the eyes? The staff has an oculist, why not a dentist also?

If this matter of dental sepsis could be given an important place in hospital routine, the hospital would advance a step in genuine education—teaching people how to live.

GEORGE T. TYLER, M. D.,
Greenville, S. C.

As an outcome of an organization known as the Golden Rule Society, formed in Grand Rapids, Mich., nine years ago, by twelve little girls, an endowment for a children's hospital to be conducted in connection with the Butterworth Hospital in that city has been created by Mr. and Mrs. Edward Lowe. The original purpose of the society was to earn money to buy a wheel chair for the use of the children patients at Butterworth, but the success of this undertaking encouraged the youthful members to undertake greater things, and the little band of workers has now grown in number and usefulness until it has become one of the most important philanthropic bodies of the city. Several years ago the Golden Rule Society furnished a children's ward at Butterworth Hospital, and and $350 has been contributed annually for the maintenance of this ward. Recently the children have been striving to raise $5,000 for the establishment of a perpetual free bed. The announcement of Mr. and Mrs. Lowe coming on top of their efforts brings the realization of their fondest hopes. The membership of the society is now over 100 and includes a boys' division. The girls hold weekly sewing circles, and various other means of earning money are employed.

Dr. Wm. H. Walsh, superintendent and chief medical officer of the Municipal Hospital for Contagious Diseases at Second and Luzerne streets, Philadelphia, has accepted an appointment as medical superintendent of the New Children's Hospital now being erected at Eighteenth, Bainbridge, and Fitzwater streets, that city. Dr. Walsh is a young man, having been born in Philadelphia in 1881. He left Girard College to enter the United States Hospital Corps, serving in New Mexico and the Philippines. He was chief sanitary inspector of Manila during the cholera epidemic of 1902. Since last March Dr. Walsh has been acting chief resident physician of the Philadelphia General Hospital.

THE ST. PAUL MEETING—A GLANCE AT THE PROGRAM.

This Year Brings a Third Section, That on Out-Patient Work—Papers on Practical Subjects Promised by Workers Who Have Studied Their Themes in Every-Day Service—A Running Comment on Topics to Be Discussed.

CHICAGO STOP-OVER.

Arrangements have been made for headquarters for the hospital people at the Sherman Hotel, Clark and Randolph streets. Registration rooms will be open, and a reception committee will be present to take care of visitors. Mr. Bacon has arranged an excellent program to extend over Friday, Saturday, and until midnight Sunday, when the Burlington hospital special train will leave for St. Paul.

Last Call for St. Paul.

Fellow Members of the American Hospital Association:

East, West, North, and South have heard the call to the great convention of the American Hospital Association to be held at St. Paul August 25, 26, 27, and 28.

Many have already made their reservations on the association's special train which leaves Chicago August 25, at 11:55 p. m. Mr. Bacon, our energetic treasurer, has arranged to show the members the many new things in hospital architecture and equipment in the great Chicago institutions. Leaving that city, the train will run along the beautiful valley of the Mississippi.

The Committee on Local Arrangements is doing everything in its power to make the meetings a success. The city officials are arranging to give the members a very hearty welcome. A copy of the preliminary program has been sent to each member of the association. The president has spent much time in arranging this excellent program. The speakers are too well known in the hospital world to require any words of commendation. These able essayists will in the course of their addresses cover every phase of institution work.

Small hospitals will receive much attention at the meetings. One whole day is to be given up to the discussion of the problems which perplex the officials of the smaller hospitals. So important are the subjects to be discussed that no hospital can afford to be without its representatives at the convention.

The majority of hospitals are paying the expenses of their officials to the meetings of the American Hospital Association. Boards of trustees are coming more and more to realize that it pays to do this. Is it not a fact that many institutions have saved thousands of dollars by putting into practice suggestions learned by their officials at the meetings of the association?

The number of members is increasing daily. Doubtless there are some of the members of your medical staff, board of trustees, or nursing staff who are waiting for an invitation to join the association. Forward their applications to the secretary, Kingston, Can. Do it now.

Let us unite to make this the largest and best meeting in the history of this great organization. Let us make one long, persistent effort to get the names of new members, and to get as many as possible to go to the St. Paul convention.

Sincerely yours,
H. A. Boyce, Secretary.

The Meeting.

The American Hospital Association meeting this year promises to be the most successful the association has ever had—not wholly because unusual effort has been made to make it so, but because there seems to be an awakening in hospital activities everywhere that promises a large attendance and an unusually intelligent participation in the discussions.

More hospital superintendents, trustees, and donors of hospital funds are really studying hospital problems than ever before. Superintendents are beginning to find out that hospital training and scientific study really mean increased efficiency and better management of their institutions; and hospital trustees are beginning to find this out also, and to that end more of them than ever before are sending their superintendents to attend the meeting as an important factor in efficiency.

For all these reasons the St. Paul meeting is to be not only a very largely attended one, but it will probably give rise to more wholesome and profitable discussion by more people than any meeting that ever has been held.

Then, too, many numbers on the program are to be actual studies of problems rather than academic essays. This speaks for first-hand experience in hospital work, and such papers will undoubtedly be of far more value than the usual cut-and-dried, happily-phrased theses based on theories.

A glance at the program promises a record meeting.

IN ANTICIPATION OF THE PROGRAM.

Tuesday Morning, August 25.—At this time will be the first general session, with invocation, address of welcome by the mayor of St. Paul, the president's annual address, and two standing committee reports—one by Dr. C. K. Clarke on "Medical Organization and Medical Education" and one by Mr. Louis R. Curtis on "Hospital Construction."

We need not anticipate Dr. Howell's address. From inquiries which the president has been instituting during the year in preparation for what he will have to say, it may be judged that his address will be full of meat on live hospital problems.

Dr. Clarke's task this year is one of tremendous possibilities. During the past few years it has become well recognized that the hospital is the best school—indeed, the only real school—for medical education; hence the hospital and the medical school must be closely allied. Dr. Osler recently said in an address that he thought student examinations might well be done away with entirely and also most of the school lectures, and that the time could be more profitably spent by the students in quiet home study and in actual work in the wards of the hospitals. Perhaps we have not gone so far yet, but the trend is in

that direction. If the work of the hospital and the school are so closely intermingled and interdependent, harmonious organization is of high importance, and Dr. Clarke's experiences as the head of a university hospital (the Toronto General) fit him to present some extremely practical points. There is a difference of opinion on one or two points about this matter; there are those who think the medical school should dominate all the activities of the hospital, while most naturally a good many hospital superintendents and an even larger number of hospital trustees feel that the dominance of the hospital for the purpose of taking independent care of its patients must be maintained. Undoubtedly there is a happy medium here somewhere, and Dr. Clarke will perform a fine service to medical education and to hospital efficiency if he can point out some details of organization that will be a happy compromise.

Mr. Curtis likewise has a pleasant and an important task in recounting what has been done in hospital construction and pointing the way to the future. Mr. Curtis' own experiences and his own inclinations have all been connected with the so-called "block" hospital principle, and his own institution is one of the best examples of this anywhere in this country. It seems to us the time has come when a halt must be called on blind following by this country of the antiquated ideals of Europe. We have all seemed more than willing to build our hospitals after German models on the pavilion type, the units spread over large areas of ground, and now it seems that Europe, especially Germany, is awakening to a realization of the fact that expenses of administration and inconveniences of operation are vastly increased by this style of architecture. Protests without number have been urged by German architects during the past year or two against a continuance of the pavilion type of hospital. It is to be hoped that Mr. Curtis will elaborate on this phase of hospital construction.

TUESDAY AFTERNOON.—Except for Mr. Shillady's paper (No. 3), Tuesday afternoon's session is given over to a discussion of nursing problems, and undoubtedly the session will be interesting and entertaining, not to say vehement, from start to finish. Further elaboration of the prospect of discussion of the nursing problems would almost of necessity take us into mooted questions and diverse opinions, which there will be time enough to express at the meeting.

Mr. Shillady's paper is something entirely different, and contemplates practically a hospital survey of a sufficient amount of territory to give us some very definite ideas about the problem of taking care of the sick. At the Boston meeting Mr. Bradley told us about a hospital survey that had been made in a restricted area in Massachusetts and which resulted in the information that only 11 percent of the sick who had required the services of a physician had been cared for in hospitals. He also told us of a similar piece of work that had been done in Birmingham, England, where it was discovered that only 13 percent of the sick had been cared for in the hospitals and the balance in their own homes. Mr. Shillady's committee has elaborated on this work, covering a larger area and a more diverse population, and his report should be most illuminating and should carry with it some rather definite proposals in regard to the hospital facilities that are now needed and that are likely to be needed in the future. THE MODERN HOSPITAL has held and still holds that, because of the elaboration of modern methods in diagnosis and treatment, every sick person is entitled to a bed in a well-equipped and well-managed hospital. If this is true, we are far behind the number of hospital beds in this country that are actually needed. It is true, if we had all the beds that such a program contemplates, they would not now be used, because public opinion has not followed very rapidly the hospitalization of the sick, and many sick people still remain at home by preference. This mental state of the public is rapidly changing, and perhaps the present era of hospital activity will result in a sufficient number of beds as time goes on to meet the changed public demand.

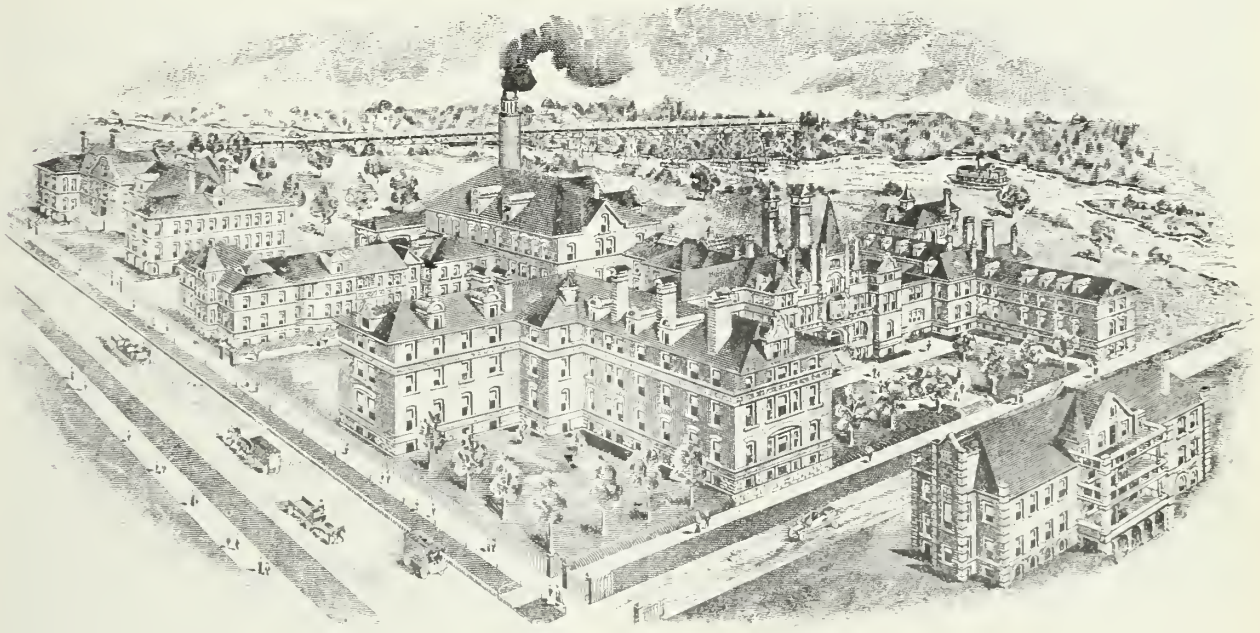

Fig. 1. City and County Hospital, St. Paul.

TUESDAY EVENING.—The evening session on Tuesday is another general meeting, and two of the four numbers are again on nursing problems; but we need not cavil at this, because most of us can remember that four or five

years ago about 90 percent of the time of the meeting was taken up with strictly nursing activities. It is something well worth while just to have learned that, while nursing is perhaps the most important factor in hospital management, it is not 90 percent.

Dr. Morritt's paper on "Medical and Sociological Departments of a Coal and Iron Corporation" frankly invades the field which we have come to call generically "social insurance." We shall probably hear more about the care of the sick by the great industrial organizations in the near future than about any other phase of the public health. Almost every commercial organization that has any considerable number of employees is awakening to the necessity to guard the health of the people if for no other reason than protection of their own best interests and to increase their own efficiency. There are some unsettled questions in regard to "social insurance," and we seem not to be giving very much attention to these as yet; as, for instance, are we going to follow the course of England and the Lloyd-George regime in regard to the so-called panel practice of medicine—a practice which England borrowed from Germany, though the German ideal differs somewhat by the maintenance of three separate insurance organizations, all of them under state direction? Again, are the industrial corporations going to insure the health and lives of their own employees in this country by means of special insurance funds set aside for the purpose? Or are there to be great industrial insurance bodies maintained under the supervision of the Government or of the states? Or are we to follow the lead of Massachusetts, which has a most efficient state bureau of industrial insurance, which stands between the employee, the corporation employing him, and the industrial insurance company? All these questions are vital just now, and focused upon them are some of the best minds in the business world. Dr. Morritt's paper will tell about a most efficient form of public health work among the employees of a large industrial corporation.

Fig. 2. City and County Hospital, St. Paul—New tuberculosis pavilion.

Mr. Sturm's paper on "The Artificial Lighting of Hospitals" is to be a treat. Mr. Sturm is a Chicago architect who has specialized in hospital work for some years. He has spent a good deal of time and study on problems of light. He has made a great number of mistakes, but, unlike some of the rest of us, he has learned something by each mistake that he had made. This paper is to be illustrated with lantern slides, and will be not only most profitable, but entertaining as well.

WEDNESDAY MORNING.—The Wednesday sessions are to be nicely divided. The large hospitals meet in the convention hall morning and afternoon, the small hospitals meeting in the lounging room of the hotel morning and afternoon, and a general session for all is held in the evening.

In the Wednesday morning session of the large hospitals there is a most attractive program. Dr. Charles H. Mayo's paper on "The Hospital as an Educational Institution" and Dr. Joseph B. Howland's paper on "Clinical Records" are on the same general lines. If we are to have the best possible good out of a hospital as a factor in medical education, properly kept clinical records are an absolute necessity. Efficiency in the one presumes good work in the other. There are probably not a dozen hospitals in the United States whose clinical records are maintained as a routine so that they will lend themselves to (1) a scientific study of the individual case, (2) for purposes of reference in the study of a general subject of medical interest, and (3) a conclusive study of the individual case in the event of a future need in connection with a similar case in the same family.

Nearly all of us are disposed to find fault with the blank forms of records, while as a matter of fact the fault lies in the failure to keep the records we have. If Dr. Howland can tell us how to compel interns and staff men to keep their records properly and fill out their blank forms, Dr. Mayo will be able to give us an entrancing story of the value of hospital records for purposes of medical education.

Dr. George O'Hanlon, of Bellevue, has gone very far recently in a study of his topic, "Responsibility of the Municipality to the Expectant Mother of the Middle Class." A few weeks ago we had a report by Miss Carolyn Van Blarcom for the New York Committee for Prevention of Blindness which was a most elaborate arraignment of the midwife system as practiced in this country. That report stated that about 50 percent of all blindness was due to improper care of women during confinement. On the other hand, Bellevue Hospital has probably passed through its doors more gynecological cases due to midwife mismanagement than any other institution in this country, although there are other cities than New York which have been greater offenders in this respect, notably St. Louis, 75 percent of whose women have been attended by midwives. What are we to do about it? Perhaps Dr. O'Hanlon can start us right with a solution.

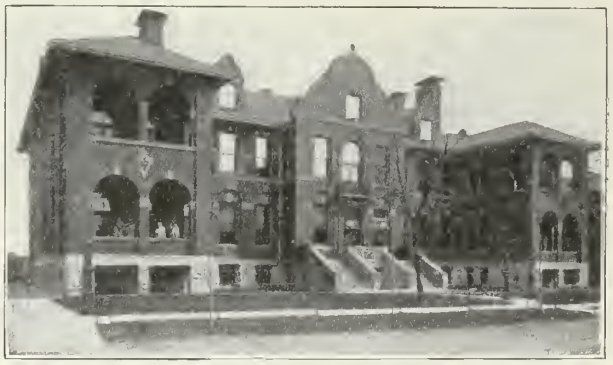

Fig. 3. City and County Hospital, St. Paul—Contagious diseases pavilion.

Dr. Wm. H. Walsh's story, "The Hospital Superintendent—Past, Present, and Future," is a somewhat hackneyed tale. There have been three classes of hospital superintendents during the last quarter of a century, and hospital annals will be brilliant for many years as a result of the work of Rowe, Hurd, Ludlam, and Fisher; the second class is composed of their pupils, the trained men

and women who have sat at the feet of these masters of the profession; the third class is a sorry story about which the less said the better, because it is a class gradually disappearing and must entirely disappear if hospital efficiency is to be universal. If Dr. Walsh can tell us anything new in his topic, it must take the nature of suggestions for the practical education and training of hospital administrators, because there is a tendency just now for practicing physicians who have failed in their own calling, and nurses who have conceived in themselves conspicuous executive talent, to visit a good hospital here and there for a few weeks or months, picking up what they could of hospital methods and management, and then offer themselves for positions as hospital executives. Of course such training is better than none, but it is not sufficient.

In the afternoon session of the larger hospitals Dr. J. W. Fowler, of the new Louisville City Hospital, leads off with a paper on "The Scientific, Economic, and Humane Conduct of Municipal General Hospitals in the Southern States." Dr. Fowler, being from the state of Kentucky, knows politics, and he knows the curse that politics has placed on municipal hospitals all over this country. If he can tell us some way by which we can fumigate or disinfect against politics in municipal hospitals, he will have shown us a way to conduct these institutions scientifically, economically, and humanely. In this direction lies his task.

Miss Holloway's paper on "Hospital Housekeeping" invades an attractive field, and, in connection with a discussion by Miss Greener, of the Hackley Hospital, and Miss Holden, dietitian at St. Barnabas Hospital at Minneapolis, the topic ought to be full of interest and profit. We have much to learn about hospital housekeeping, more especially in the direction of keeping definite accounts of what is done, what is necessary to be done, how many people it should take to do it, and how much it should cost. In Miss Holden's part of the discussion the ground has hardly been scratched in our literature; we talk about diets in a vague sort of a way, but we feed our hospital sick badly and our hospital families worse.

Dr. Pratt's paper on "Hospital Ambulance Service" ought to be of very general interest because there is an underlying factor here to which not enough attention has been given. The automobile people tell us what kind of ambulance is best, and, in the event that we think we know more about the particular type of vehicle than they, they can build us what we want; but we, ourselves, must settle the problem of whether hospitals must maintain their own ambulances, or whether that is the duty of the municipality—the police and health departments. Just now there is a tendency on the part of a good many hospitals to maintain one or more ambulances for the purpose of quick service to rush off after pay patients, that they might lose if they depended on outside agencies for ambulance service. It is hardly an inspiring spectacle to see hospitals running over the city with their ambulances to grab pay patients from one another, but it is being done.

Wednesday Morning—Small Hospitals.—There are three excellent papers in the program of the Wednesday morning meeting of the small hospital section—Mr. A. E. Clement's "Raising Hospital Funds—Its Educative Value," Dr. Willard T. Graham's "The Private Hospital Enterprise as a Public Interest," and Mr. J. B. Franklin's "Some Ways of Advertising Small Hospitals." The subject matter of all these papers runs pretty close together and often intermingles. In the course of a program on money raising for a hospital, the community must obtain a lot of information about hospital activities and their value in the community. That is why it is so necessary that the raising of funds must be in the hands of people who are to be permanently interested in the particular hospital for which the money is to be used. It is quite certain that these so-called "whirlwind campaigns" must lead to disaster sooner or later, because promises are made that cannot be kept. The more information there is given to the public during a campaign of money raising, the more intelligent will be the public interest in the hospital after it is completed and in operation, as Dr. Graham's paper will, no doubt, insist. As for advertising small hospitals, no doubt Mr. Franklin, who is superintendent of the Baptist Memorial Hospital at Dallas, Texas, will tell us that the best way to advertise is to run a good hospital, give the doctors and the patients what they need for the treatment of disease, and give the public courteous attention always. If we do these things, the hospital will be its own advertisement and will not need any other.

Fig. 4. St. Joseph's Hospital, St. Paul.

In the afternoon session there are some more exceedingly interesting topics for discussion. Mr. Olson's report on Mr. Haworth's paper of last year about what the American Hospital Association can do for the hospitals of America is being answered at this meeting, and has been answered at every meeting that the Association has held. It can bring the hospital people together for discussion of their problems, it can initiate the collection of data on various hospital problems by the assignment of appropriate papers, and it can be always an inspiration for better work by reason of the experiences of those who attend, as these are brought out in the discussions.

Rev. Irving B. Johnson's paper on "The Experiment of a General Hospital Without a Staff" ought to contain some surprises. Dr. Johnson is a trustee of St. Barnabas Hospital, Minneapolis, which has been trying out the administration of a general hospital without a staff. There is no doubt that some of the experiences of St. Barnabas Hospital impelled its directors and superintendent to try almost anything as a way out of their troubles, because the hospital had been infested with an iniquitous staff service; but it would seem to the innocent bystander that because we have a poorly organized staff made of discordant elements is not a particularly good reason why a properly constituted staff is not the best method of administration of the scientific parts of a general hospital, provided, of course, the hospital intends to do any scientific work or any charity work. It will be interesting to know how St. Barnabas has come out of its first year of independent administration without a staff.

Miss Nina Dale's paper on "The Hospital Family—Cooperation in Domestic Management" seems to be one of the most promising papers on the program of any section. Miss Dale's own experiences are the best text for her paper. She went to the German Hospital in Chicago as superintendent of the training school five years ago. It was a 50-bed hospital, poorly administered, poorly nursed, and poorly equipped. Since then the hospital has grown to 200 beds in capacity, and a quarter of a million dollars have been spent in betterment and new buildings. After a few months in the institution Miss Dale was made superintendent of the hospital, and today it is one of the best administered institutions in Chicago. No small part of Miss Dale's success has been due to the cooperation and team work of her hospital family. Dr. Howell must have known this when he asked her to write her paper. Every worker in Miss Dale's hospital is part of the machine, all of whose parts work without friction and in coordination with all the other parts. About two-thirds of good hospital administration hinges on the true working of the machine.

Dr. E. B. Smith's paper on "The Superintendent of a Small General Hospital" should be well worth while. Dr. Smith is a trustee of the Boulevard Sanatorium in Detroit. Trustees, as a rule, are not very well informed about the duties and responsibilities of hospital superintendents, whether it be a large or small institution. Let us hope that Dr. Smith, who is also a member of the staff, will tell his fellow trustees in hospitals over the country that a hospital superintendent is a person charged with the responsibility for the administration of the institution, and that, while trustees should be willing to cordially support and counsel with the superintendent, they should not interfere with details of administration; that is the principal thing for trustees of hospitals to learn.

Fig. 5. St. Luke's Hospital, St. Paul.

WEDNESDAY EVENING—GENERAL SESSION.—The first part of the session is a report of the committee appointed under Dr. Goldwater's resolution of two years ago to study the character and value of preventive work of all kinds, and to suggest methods by which various phases of public health service can be coordinated, with a view to a smooth working out of the whole problem.

The work of this committee will never end, but a good beginning can be made. It is understood that one meeting of the committee has been held and that views have been interchanged. No doubt the report which is to be made by the chairman, Dr. Hornsby, will lay down some rather general lines toward which the work can be carried further. THE MODERN HOSPITAL holds that the word "hospital" and the phrase "public health service" are interchangeable, and that the modern hospital is a center around which must revolve all other health activities, whether it be the moral, mental, or physical health of the people. If this is true, then this committee's work can be diagrammed with a hospital occupying the hub, with all other health activities operating as the spokes of the wheel radiating from the hospital center.

Mr. Michael M. Davis has shown so definite a leadership in out-patient and dispensary work, and his leadership has been so practical, and has shown such great detail, that we know we can always learn something from his papers, while Dr. Young, taking another phase of the same subject—namely, "An Effort Toward Standardization and Cooperation in Out-Patient Service"—has had to chairman of the committee on Constitution and By-Laws, can be present, as he will certainly have an entertaining and instructive report on developmental work. The American Hospital Association was conspicuously honored in the person of one of its leading members when Dr. Goldwater was appointed health commissioner of New York City last spring.

The report of the committee on "Efficiency and Proggress" by Dr. Shutt should at least tell us how far we have gone in hospital progress, even if he does not tell us how far we have yet to go. The one is history, the other is prophecy. If we are going to have prophecy, let Dr. Shutt look to the stars for his inspiration, for we must go ever higher and higher.

Mr. Franklin B. Gilbreth's paper on "Scientific Management in Hospitals" will probably be an engineering report. Mr. Gilbreth read a paper on a closely allied subject at the joint meeting of the Section on Hospitals and the Section on Surgery in the recent Atlantic City meeting of the American Medical Association. His paper attracted wide attention, although it was predicated on the possibility of standardizing the technic of surgery. Mr.

Fig. 6. University Hospital, University of Minnesota, Minneapolis.

do with one of the large dispensaries and out-patient services in New York City that is famous for the completeness and high value of its "end results."

Mr. Edward F. Stevens' paper on "The Need of Better Hospital Equipment by the Medical Man" offers many possibilities. Mr. Stevens is an architect who has specialized in hospital construction. A good many of us have been of the opinion that architects would do very much better if they confined their activities to building what the hospitals need for their utilitarian purposes. Up until now we have had either too much of the architect's opinions about hospital construction or not enough, because this country is certainly cursed with some very bad and expensive hospital architecture—at least from the standpoint of administrative economies. Perhaps Mr. Stevens can point out a way by which we can cut down hospital expenditures, a thing most vital to be done if hospitals are to grow in number and improve along the lines laid down for them by most of the prophets.

THURSDAY MORNING—GENERAL SESSION.—This session is to be devoted partly to business and reports of committees and the like. It is to be hoped that Dr. Goldwater,

Gilbreth believes that the surgeon's hand should move with a prearranged precision over mathematically calculated distances to perform an operation prearranged in its last detail. Even a pianist who followed Mr. Gilbreth's ideas would play without expression or individualism; how much more must a surgeon lose his individuality and his individual skill in order to perform along mathematical and prearranged lines! However, if Mr. Gilbreth can tell us how to work our hospital help, including our nurses, so that a greater amount of labor can be performed with a smaller expenditure of energy, his paper will be a godsend, because we need improvement along those lines.

THURSDAY EVENING—TWO SESSIONS.—Dr. Andrew R. Warner, of Lakeside Hospital, Cleveland, will conduct a round table on "Out-Patient Work" in the convention hall of the hotel. It is impossible for such a program to be made up of connected questions submitted by members of the association, and in all probability Dr. Warner's committee will have worked out a program for this meeting that ought to be full of interest because out-patient work is still in its infancy, while the out-patient department of

a hospital is without question the line of nearest communication between the public and the hospital, and is the go-between, so to speak, that keeps the hospital in touch with the community that it serves.

In the lounging room of the hotel on this same evening Mr. D. W. Olson, of the Swedish Hospital, Minneapolis, will conduct a round table for the small hospital section. Nine questions have already been formulated and are published elsewhere, with the program. Some of these questions are most practical and important, and will form the vehicle for most valuable discussion. Undoubtedly other questions will grow out of these, and the meeting should be one of the most profitable of the whole convention.

Friday Morning—General Session.—This session is practically given over to discussion of hospital finances and hospital statistics. Dr. R. J. Wilson's paper ought to to them and certainly of no value—we know better now. We know that the law of averages rules in sickness as well as in health, and that these statistics have a definite and special bearing on almost every detail of hospital administration; and we know that these statistics are one of the largest factors in our various plans for hospital efficiency. Dr. Balduan, as the statistical sharp of the New York City Health Department, can get more concrete information out of a set of morbidity statistics that are practically meaningless to the ordinary hospital worker than any other man in this country, and he can compile rows of figures that have a more vital meaning to the hospitals of this country than any other man; therefore his paper should be illuminating, and the hospital people should study it carefully for what it means to them in their every-day routine hospital practices.

Fig. 7. Abbott Hospital, Minneapolis.

be an illuminating story of cost accounting and hospital finance in a large city department.

Mr. C. B. Grimshaw, superintendent of the Roosevelt Hospital, New York, was one of the original four who established the hospital accounting system now in vogue, with modifications, in nearly all American hospitals. Without any doubt Mr. Grimshaw has found weak spots in the original system which he helped devise, and his illumination of the subject should be valuable and instructive.

Dr. Charles Balduan's paper on "Hospital Morbidity Statistics" must hold more than a general interest. For a good many years it was a general impression among hospitals that morbidity statistics were of interest only in the census bureau of the Government, and that the hospitals were being asked to do work that was of no interest

This session ends with Dr. Collins' question drawer. These round tables and question drawers are among the most interesting features of the hospital meetings, and they will be all the more interesting in proportion as the members of the association will ask questions calculated to bring out timely and instructive discussion.

Friday Afternoon—General Session.—The last session of the meeting starts off with three interesting papers and ends with reports of committees, selection of the next place of meeting, the election of officers, and the introduction of the new president.

The first paper, that on "California and the Eight-Hour Law," by Miss A. A. Williamson, superintendent of the California Hospital of Los Angeles, is on a subject that has been more freely discussed during the past year than any other topic of nursing. Miss Williamson has

Fig. 8. City Hospital, Minneapolis.

her knowledge first hand as to the operation of the eight-hour law. Her paper will be all the more illuminating and instructive if in it she gives us the viewpoint of all the interested factors in California—that of the public, that of the labor leaders who were behind the original law as it passed the legislature, that of the hospitals, and the viewpoint of the nurses in training. A great many contradictory reports have come from California about the eight-hour law, and it will be interesting to know what the exact truth is. We are hearing every day that the pupil nurses, in whose interest the law was supposed to have been passed, do not approve of it. We hear that their complaint is that it narrows their opportunity for education, limits their service to the sick, and consequently interferes with their adequate training. In a very general way a good many of us doubt whether the patient's best good is served by three changes in nurses during the twenty-four hours. Miss Williamson should tell us how this works out. There are economical questions as well, because, while some of the leaders in the nursing profession protest against the "exploitation of pupil nurses" by the hospitals, there is an economical question here. If the hospitals of the country are to grow in number, and in the number of beds, to meet the constantly growing demand, hospital expenses must be cut, and yet some of the leaders in the nursing profession insist on a constantly growing expense account connected with the nursing in hospitals. Perhaps they are entirely right, and perhaps new arrangements must be made by which such expenditures can be taken care of. This California experience may elucidate some points in this problem.

PROGRAM.

TUESDAY, AUGUST 25.

9:30 A. M.

Registration and enrollment.

MORNING SESSION—10 A. M.

1. Invocation—Rev. Edwin B. Woodruff, pastor St. Clemens' Memorial Church, St. Paul, Minn.

2. Address of Welcome—Hon. Winn Powers, mayor of St. Paul.

3. President's Address—Dr. Thomas Howell, superintendent New York Hospital, New York City.

4. Report of the Committee on Medical Organization and Medical Education—Dr. C. K. Clarke, superintendent Toronto General Hospital, Toronto, Canada.

5. Report of Committee on Hospital Construction—Mr. Louis R. Curtis, superintendent St. Luke's Hospital, Chicago, Ill.

AFTERNOON SESSION—2:30 P. M.

1. Where Shall Nurses be Trained?—Miss Roberta M. West, R. N., supervising nurse Philadelphia Hospital for Contagious Diseases, Philadelphia, Pa.

2. The Presentation of Theoretical Work to Student Nurses—Miss Mary C. Wheeler, R. N., superintendent Illinois Training School for Nurses, Chicago, Ill.

Discussion—Miss Rachel A. Metcalfe, superintendent Central Maine General Hospital, Lewiston, Me.; Miss Lulu Justis, superintendent Brokaw Hospital, Bloomington, Ill.; Dr. R. O. Beard, secretary University of Minnesota Hospitals, Minneapolis, Minn.

3. How the Average Community Cares for Its Sick—A Study in the Amount, Character, and Care of Sickness in Selected Urban and Rural Districts of Dutchess County, N. Y.—Mr. John R. Shillady, assistant secretary Hospitals Committee State Charities Aid Association, 105 East 22d street, New York.

4. Report of Committee to Consider the Grading and Classification of Nurses—Miss Charlotte A. Aikens, Chairman, Detroit, Mich.

General Discussion.

EVENING SESSION—8 P. M.

1. Nursing in the Homes of People of Moderate Means—Miss Anna Louise Davis, Brattleboro, Vt.

2. Medical and Sociological Departments of a Coal and Iron Corporation—Dr. Walter Morritt, superintendent Bethel Hospital, Colorado Springs, Colo.

3. Efficiency in Hospital Nursing—Miss Minnie Goodnow, 9 Park street, Boston, Mass.

Discussion—Dr. J. N. E. Brown, superintendent Detroit General Hospital, Detroit, Mich.; Dr. E. H. Young, assistant superintendent Rockwood Hospital for Insane, Kingston, Canada; Miss Louise M. Powell, R. N., superintendent of nurses University Hospital, Minneapolis, Minn.

4. The Artificial Lighting of Hospitals—Mr. Meyer J. Sturm, 116 Michigan avenue, Chicago, Ill.

Discussion—Mr. O. H. Bartine, superintendent Hospital for Ruptured and Crippled, New York City; Dr. Wayne Smith, superintendent Harper Hospital, Detroit, Mich.

General Discussion.

WEDNESDAY, AUGUST 26.

MORNING SESSION—10 A. M.

SECTION OF LARGER HOSPITALS AT THE ST. PAUL HOTEL (CONVENTION HALL).

1. The Hospital as an Educational Institution—Dr. Chas. H. Mayo, Rochester, Minn.

Discussion—Dr. R. O. Beard, secretary University Minnesota Hospitals, Minneapolis, Minn.

2. Hospital (Clinical) Records—Dr. Joseph B. Howland, assistant resident physician Massachusetts General Hospital, Boston, Mass.

Discussion—Dr. Louis H. Burlingham, assistant superintendent Peter Bent Brigham Hospital, Boston, Mass.

3. Responsibility of the Municipality to the Expectant Mother of the Middle Class—Dr. Geo. O'Hanlon, general medical superintendent Bellevue and Allied Hospitals, New York City.

Discussion—Dr. Chas. F. Sanborn, superintendent Cincinnati General Hospital, Cincinnati, Ohio; Dr. R. E. Castlelaw, superintendent Kansas City General Hospital, Kansas City, Mo.

4. The Hospital Superintendent, Past, Present and Future—Dr. Wm. H. Walsh, superintendent Philadelphia Children's Hospital, Philadelphia, Pa.

Discussion—Dr. John M. Peters, superintendent Rhode Island Hospital, Providence, R. I.

General Discussion.

AFTERNOON SESSION—2:30 P. M.

SECTION OF LARGER HOSPITALS AT THE ST. PAUL HOTEL (CONVENTION HALL).

1. Scientific, Economical, and Humane Conduct of Municipal General Hospitals in the Southern States—Dr. J. W. Fowler, superintendent City Hospital, Louisville, Ky.

Discussion—Dr. Wayne Smith, superintendent Harper Hospital, Detroit, Mich.; Dr. Guy L. Noyes, superintendent Parker Memorial Hospital, Columbia, Mo.

2. Hospital Housekeeping—Miss Emma F. Holloway, Pratt Institute, Brooklyn, N. Y.

Discussion—Miss Elizabeth A. Greener, superintendent Hackley Hospital, Muskegon, Mich.; Miss Margaret Holden, dietitian St. Barnabas Hospital, Minneapolis, Minn.

3. Hospital Ambulance Service—Dr. Mason R. Pratt, superintendent Hospital of Good Shepherd, Syracuse, N. Y.

Discussion—Mr. Frederic B. Morlock, superintendent Memorial Hospital, Richmond, Va.; Dr. Wm. O. Mann, superintendent Massachusetts Homeopathic Hospital, Boston, Mass.

General Discussion.

MORNING SESSION—10 A. M.

SMALL HOSPITALS SECTION AT THE ST. PAUL HOTEL (LOUNGING ROOM). MISS MARY A. BAKER, SECOND VICE-PRESIDENT, CHAIRMAN.

1. Raising Hospital Funds—Its Educative Value—Mr. A. E. Clement, commissioner Galloway Memorial Hospital, Nashville, Tenn.

2. The Private Hospital Enterprise as a Public Interest—Dr. Willard T. Graham, superintendent Methodist Episcopal Hospital, Des Moines, Iowa.

3. Some Ways of Advertising Small Hospitals—Mr. J. B. Franklin, superintendent Baptist Memorial Hospital, Dallas, Texas.

Discussion—Miss Nettie B. Jordan, superintendent City Hospital, Aurora, Ill.; Mr. Pliny O. Clark, superintendent Ohio Valley General Hospital, Wheeling W. Va.; Mrs. Maud Horner, superintendent General Hospital, Devil's Lake, N. D.

General Discussion.

AFTERNOON SESSION—2:30 P. M.

SMALL HOSPITALS SECTION AT THE ST. PAUL HOTEL (LOUNGING ROOM). MR. H. E. WEBSTER, FIRST VICE-PRESIDENT, CHAIRMAN.

1. Report of Committee to Consider Suggestions made in Mr. Haworth's paper on "What the American Hospital Association Can Do for the Hospitals of America—Mr. G. W. Olson, superintendent Swedish Hospital, Minneapolis, Minn.

2. The Experiment of a General Hospital Without a Staff—Rev. Irving B. Johnson, D. D., trustee St. Barnabas Hospital, Minneapolis, Minn.

Discussion—Miss Ella C. Ingwerson, superintendent La Crosse Hospital, La Crosse, Wis.; Miss Ida M. Barrett, superintendent Union Benevolent Association Hospital, Grand Rapids, Mich.

3. The Hospital Family Cooperation in Domestic Management—Miss Nina Dale, R. N., superintendent German Hospital, Chicago, Ill.

Discussion—Miss Jennette F. Duncan, superintendent Delaware Hospital, Wilmington, Del.

4. The Superintendent of a Small General Hospital—Dr. E. B. Smith, trustee, Boulevard Sanatorium, Detroit, Mich.

Discussion—Miss Emma A. Anderson, superintendent New England Baptist Hospital, Boston, Mass.; Miss F. E. Smith, R. N., superintendent St. Luke's Hospital, Duluth, Minn.

EVENING SESSION—8 P. M.

1. Report of the Committee to Study the Character, Cost, and Value of Direct and Indirect Work for the Prevention of Disease now Conducted by Hospitals and Dispensaries, to Arrange in the Order of their Importance and Practicability Successive Steps for the Extension of such Work, and to Prepare Methods for its Financial Support and for its Correlation with the Similar Work of other Agencies, Public and Private—Dr. J. A. Hornsby, chairman, THE MODERN HOSPITAL, Chicago, Ill.

2. Report of Committee on Out-Patient Work—Mr. Michael M. Davis, Jr., director Boston Dispensary, Boston, Mass.

3. Out-Patient Service, an Effort Toward Standardization and Cooperation—Dr. Chas. H. Young, assistant superintendent Presbyterian Hospital, New York City.

Discussion—Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich.

4. The Need of Better Hospital Equipment for the Medical Man—Mr. Edward F. Stevens, 9 Park street, Boston, Mass.

Discussion—Miss Mabel McCalmont, R. N., 52 Wall street, New York; Mr. Richard E. Schmidt, 104 South Michigan avenue, Chicago, Ill.

THURSDAY, AUGUST 27.

MORNING SESSION—10 A. M.

1. Report of Membership Committee.

2. Report of Treasurer.

3. Report of Auditing Committee.

4. Report of Committee on Constitution and By-laws and on Development of the Association—Dr. S. S. Goldwater, chairman, commissioner of health, New York City.

5. Report of Committee on Efficiency and Progress—Dr. Cleveland H. Shutt, commissioner City Hospital Department, St. Louis, Mo.

6. Report of Special Committee on the Inspection, Classification, and Standardization of Hospitals—Dr. J. A. Hornsby, chairman, THE MODERN HOSPITAL, Chicago, Ill.

7. Scientific Management in Hospitals—Mr. Frank B. Gilbreth, Providence, R. I.

Discussion—Dr. A. B. Ancker, City and County Hospital, St. Paul, Minn.; Dr. Chas. B. Bacon, superintendent City Hospital, Blackwell's Island, N. Y.

EVENING SESSION—8 P. M.

OUT-PATIENT SECTION—ROUND TABLE—AT ST. PAUL HOTEL (CONVENTION HALL).

Conducted by Dr. Andrew R. Warner, superintendent Lakeside Hospital, Cleveland, Ohio.

Questions and problems which any member of the association desires to have discussed at this meeting may be sent to the chairman at any time before the meeting. The Committee on Out-Patient Work will arrange discussion by those best qualified to present each problem.

EVENING SESSION—8 P. M.

SMALL HOSPITALS SECTION AT THE ST. PAUL HOTEL (LOUNGING ROOM).

Round Table—Conducted by Mr. G. W. Olson, superintendent Swedish Hospital, Minneapolis, Minn.

1. Should the expenditures of the training school be kept separate and distinct from those of the hospital?

2. Where a hospital has but one ambulance, which should it be—horse, electric, or gasoline?

3. What is the best flooring material for wards, for corridors, for administration buildings, and for operating rooms?

4. Should nurses receive their preliminary training in technical schools?

5. Should the trays for private patients be made up in a central serving room, or in serving rooms on the floors? Should nurses or pantry maids prepare the trays?

6. Have hospitals the right to fix the rates which nurses specialing private patients in the hospitals shall charge?

7. Comparative merits of coal, gas, and electricity for cooking and heating?

8. Should cases of erysipelas be admitted to a general hospital? If so, should they be admitted as ward patients or as room patients, and what precautions should be observed in caring for them?

9. Should private rooms be disinfected after patients with simple infections have left them?

FRIDAY, AUGUST 28.

MORNING SESSION—10 A. M.

1. Report of Committee on Hospital Finance and Cost Accounting—Dr. R. J. Wilson, superintendent Health Department Hospitals, New York City.

2. Report of Committee on Hospital Accounting—Mr. C. B. Grimshaw, superintendent Roosevelt Hospital, New York City, and Mr. F. C. Townsend, trustee, S. R. Smith Infirmary, Staten Island, New York.

3. Hospital Morbidity Statistics—A Practical Method of Making Them Uniform and Collecting Them for Analytical Study—Dr. Chas. Bolduan, Department of Health, New York City.

Discussion—Dr. F. H. Holt, assistant superintendent City Hospital, Boston, Mass.

4. Question Drawer—Conducted by Dr. Herbert O. Collins, superintendent City Hospital, Minneapolis, Minn.

AFTERNOON SESSION—2 P. M.

1. California and the Eight-Hour Law—Miss A. A. Williamson, superintendent California Hospital, Los Angeles, Cal.

2. Report of Committee to Memorialize Congress to Place Hospital Instruments on the Free List—Rev. Geo. F. Clover, D. D., chairman, superintendent St. Luke's Hospital, New York City.
3. Report of Special Committee on Bureau of Hospital Information—Dr. W. H. Smith, chairman, superintendent Johns Hopkins Hospital, Baltimore, Md.
4. Report of Committee on Legislation—Dr. Wayne Smith, chairman, superintendent Harper Hospital, Detroit, Mich.
5. Other Committee Reports.
6. Report of Committee on Time and Place of 17th Annual Conference.
7. Report of Nominations Committee.
8. Election of officers.
9. Introduction of president-elect.
Adjournment.

AMERICAN MEDICAL ASSOCIATION CONVENTION.

Hospital Section Had Most Successful Meeting in Its History—Communicable Diseases, Physical Therapy, and Air Problems Discussed—Abstract of Papers Read.

The Section on Hospitals of the American Medical Association in the Atlantic City meeting, June 22 to 26, was the most successful meeting that the Hospital Section has had.

The meeting was divided into three parts, one day being given over to the discussion of the care of communicable diseases in general hospitals, the second day physical therapy was discussed, and the third day was given over to a discussion of air problems in hospitals. It will be noted that these three topics form some of the most perplexing problems with which hospitals have to deal in these days of high-pressure efficiency.

The address of the chairman, Dr. L. B. Baldwin, at the first session was devoted largely to a discussion of problems concerned in the educational side of modern hospitals. He thought a hospital could not fulfill its broadest usefulness without teaching everybody concerned in its operation, and because of this necessity the organization of the hospital would have to be changed from the older forms. He had no doubt that the organization could be vastly improved, especially in the direction of bringing the large wards and the free parts of the hospital into closer touch with medical schools, and he was sure that patients as well as students and the clinicians themselves would obtain vast benefit from such an affiliation. He did not understand why it was believed in some quarters that the admission of medical students to hospital wards was inimical to patients, and called attention to conditions in Europe, where the teaching side of hospitals seems to have developed into paramount consideration. He thought that every hospital located within reach of a medical school should seek some affiliation, even if considering alone the benefits to be derived for its patients, its interns, nurses, and the hospital help. The speaker thought the efforts being made by the Hospital Section and by the American Hospital Association to effect some sort of standardization of hospitals would prove of great value and had already shown some splendid results. He thought also that the Hospital Section and the American Hospital Association should take up the question of the periodic inspection of hospitals throughout the country with a view to making recommendations for improvements—not in a spirit of criticism, but rather of helpfulness.

The speaker found much fault with annual reports of hospitals. A perusal of a great number of annual reports showed that no consideration had been given to gathering results concerning the care of patients, and he was sure that hospital records should include statistics of follow-up work. The chief criticism of modern methods in the chairman's address concerned the growing expenses of hospital construction. There was a well-founded belief in the minds of many, he thought, that beauty of architecture had been achieved in many instances at the expense of utility. He thought that perhaps this was due in some measure to the independent activities of architects, and to the fact that they did not give sufficient consideration to the views of hospital administrators and to the counsels of members of the medical staff, who had, in a final analysis, to do their work in the institution. However, he felt that if medical staffs were to be consulted in regard to hospital architecture, they should improve their own mental equipment in order to be helpful in their views, since it was a well-known fact that medical men are, as a rule, not well grounded in their knowledge of hospital conditions or hospital activities.

COMMUNICABLE DISEASES.

The symposium on the "Care of Communicable Diseases in the General Hospital" consisted of two papers and a very wholesome discussion. The papers were by Dr. R. J. Wilson, director of hospitals of New York City, and Dr. D. L. Richardson, superintendent of the Providence City Hospital, Providence, R. I. The whole keynote of Dr. Wilson's paper is summed up in this sentence: "I have not yet reached the point of confidence in technical methods that allows me to adopt a method where every communicable disease can be housed in the same areas and attended by the same attendants, although I feel that, with a practice of perfect technic and a very small number of patients, the cross infections may be kept at a minimum."

The speaker said that cross infections are due in almost every case to want of care on the part of attendants, since the modes of communication are sufficiently well known to make secondary infections practically impossible if errors in technic are avoided; but he thought that cross infections in the New York City hospitals and in other large establishments were due usually to overcrowding and the attendant heavy work on the part of nurses and other attendants. It was almost impossible to prevent people from growing careless when they had more work than they could properly do. As a cure for this he thought that no hospital should be permitted to accept more patients than it could properly take care of, and he was sure that if all patients admitted to the hospital suffering from one of the communicable infections were isolated until the incubation period of the other communicable diseases had passed, cross infections would be reduced to a minimum, if not entirely prevented. There were other modes of spreading cross infections, the two most important of which were infected articles of food, especially milk, and infected kitchen utensils. While the carrying quality of milk was generally well known, he was sure that not sufficient attention was being paid to infected household utensils. Another, though less important, source of cross infections was through the laundry, with laundry employees as the carriers. He thought that very many times soiled clothing not regarded as infectious had been the means of carrying infections by means of the hands and clothing of those who handled it.

Finally, the speaker suggested that, "if general hospitals are to care successfully for contagious diseases, the personal service of isolation wards must be specifically used for that purpose, and not allowed to enter other wards; the hospitals should be divided into two areas, an infected and a noninfected area, and no person or thing should be allowed to go from one to the other."

Dr. Richardson's paper on this subject was most interesting, as all his papers are when treating of the care of

infectious diseases; but Dr. Richardson seems unable to differentiate in his treatment of this problem between special hospitals for the exclusive care of communicable diseases by trained people and a general hospital with large medical staffs and rotating interns, nurses, and help. The cocksureness of Dr. Richardson in regard to sources of infection is inspiring when it is not demoralizing. For instance, he said in his paper, "We have been led to believe that the causative agent survives for a considerable period after leaving the human body, and may be more or less widely distributed, that the entire ward of infectious patients and its contents—bed, bedding, etc.—are permeated by the organism causing the disease; and that such contagions may be wafted to neighboring rooms and buildings. These are all fallacies, however, under which we have been laboring, and it is no wonder that efforts to control infectious disease have not yielded better results. The truth of the matter is that, fortunately for humanity, infective organisms, under ordinary conditions of drying, rapidly lose their virulence. Though we admit the claim of bacteriologists who tell us that they resiscitate organisms after the lapse of considerable time, it is not proved that anyone ever contracted disease from such sources; indeed, there is much practical evidence against such a supposition." And he proposes in his paper that it is best to turn attention immediately to the most likely sources of infection. These he describes as follows: "Infectious diseases are kept alive in any community by exposure to frankly clinical cases, to missed cases which are unrecognized and unrecognizable, and to carriers; infection is transmitted from these three sources to the well person either by direct contact or indirect; that is, by all commonly used articles, by insects, water, milk, or other foodstuffs, especially uncooked. Indirect infection occurs but rarely through an uninfected third person, and by clothing, etc.; in all cases the medium of indirect infection must have been freshly infected."

The writer was of the opinion that visitors do not commonly introduce infections, although they might do so on rare occasions, but he thinks this source of infection is unimportant. He thinks also the importance of the laundry as a source of infection is practically negligible. He believes that practically all cases of infection and cross infection introduced into a hospital come by way of patients suffering from unrecognized disease. He thinks also a few cases are sometimes introduced through the medium of an infected nurse, or maid, or intern on duty in infectious wards.

In regard to the prevention of introduction of these infections in a general hospital, the writer divided his subject into two parts—that concerned in the construction of the building, and that having to do with the management. He did not think the question of construction was the more important of the two, excepting in so far as construction had to do with proper facilities for management. For instance, he thought that in the construction of a children's hospital there should be two departments—an isolation division and a convalescent division. In a hospital for adults there was need for facilities for isolating all new cases, though there should be sufficient of this space to isolate all suspicious cases as well. In any isolation division, he thought, the rooms should contain not more than three beds each, and that 50 percent of the rooms should be for one patient only and the capacity of the isolation division should equal one-third, or, better still, one-half the total capacity of the hospital for children; a smaller proportion in an adult hospital would be sufficient. He thought that isolation even for children was not necessarily a hardship, provided there were enough glass partitions to permit of patients seeing and talking to each other. The isolation wards, he thought, should be concentrated, but that it was not necessary they should occupy separate buildings, although they should be cut off from other parts of the building, so that the isolation area could not be made a common thoroughfare. He thought an open ward cut up into cubicals and stalls, so that the beds would be 12 feet apart on centers, each cubical to be provided with a hand lavatory, would meet all necessary conditions. He thought the ventilation of such a ward need not be different from that in any other ward.

In regard to the management of isolation cases, the writer thought the admitting officer was the fulcrum on which almost all other activities revolved, because the distribution of cases with the greatest care and the most skillful diagnosis was preeminently important. He quoted Dr. Chapin, who thought the missed cases equaled or exceeded those discovered. He pictures the qualities of an admitting officer: "He must be alert in detecting suspicious symptoms, and ultra-conservative about placing suspicious cases, either with convalescents or with those suffering from recognized diseases."

As to the management of the ward itself, he thought that to be of the greatest importance, and the keynote should be surgical cleanliness. The infection, whatever it was, should be confined to the rooms occupied by patients, while the corridors, utility rooms, and other adjunct spaces should be free from the infection. He stated it was highly necessary to have the isolation wards in charge of graduate nurses who had had experience with infectious diseases. Any pupil nurses employed should have had training in operating room technic and in the care of infectious disease. He thought the same nurses, observing strict cleanliness, could take care of all patients in the ward.

To confine the infections in the rooms in which patients are, everything must be surgically clean when it leaves the room, and certain equipment is necessary to accomplish this: the rooms should be provided with lavatories having forearm or foot valves; there should be sterilizers for dishes, utensils, bed pans, and urinals; there must be proper receptacles for refuse of all kinds, particularly things soiled with infectious discharges, all of which should be burned. A ward with 3 beds might contain three different infections, the writer thought; the beds should be 10 to 12 feet apart on centers, provided the technic of cleanliness is adequate. He thinks the danger of aerial transmission under these conditions is a negligible factor.

In regard to the cleaning up of infected rooms, the writer thought fumigation was a waste of time and money, and that the use of soap and water is sufficient. He thought nurses might live in the same home with other nurses and eat in the same dining room, provided they changed their uniform and washed hands and faces before leaving the infected ward. He thought one of the reasons why nurses oftentimes manifest incapacity in dealing with infectious patients is that they are not trained properly, and are not taught enough about the lines of communication of these diseases and about asepsis.

PHYSICAL THERAPY.

In this symposium there were two papers, one by Dr. Walter L. Bierring, professor of medicine, Iowa State University Medical School, and the other by Dr. C. Hermann Bucholz, for the past six years director of physical therapy in the Massachusetts General Hospital. Dr. Bierring's paper was from the standpoint of a medical

man—that is, an internist—and in his introduction Dr. Bierring made a very pretty line of demarkation between the duty of the hospital and the duty of the physician. The hospital, he said, should take care of the *patient* and the physician should take care of the *disease*, and he thought that a hospital could not be called efficient unless, under its organization, it could meet any or all of the requirements of the physician in the care of his patient; that is to say, it must be able to give him all the laboratory work needed, and perform any duties in connection with the treatment of the patient, such as physical therapy, and it was not sufficient for the hospital to be equipped with hydrotherapeutic apparatus, which was only one small part of physical therapy. The writer has not much patience with physical therapy for its psychic effect, and when physical therapy is considered we should not think in terms of psychology, because, when it is necessary to exercise a psychic effect on the patient, the ingenious physician will be able to find or indicate his own medium; in other words, he thought there must be a definite purpose in the use of all physical agents so far as the hospital was concerned, just as in the application of any other therapeutic procedure. Only a small proportion of patients who enter a hospital require the employment of more than one or two physical agents, the writer thought, and the best operations of these agents are oftentimes simple and inexpensive, and very frequently the best work could be done with improvised apparatus, accompanied by good sense.

In regard to the uses of water in the treatment of disease, the writer thought the mineral constituents did not often aid in the good effects, but these were due rather to the judicious adaptation of mechanical and thermic influences of water alone. He spoke of the Brand bath treatment of typhoid fever and of its good offices independent of the reduction of temperature, which he thought was not the prime consideration. He spoke of pyrexias of children, and the beneficence of warm baths and packs for the reduction of temperature, the assuaging of pain, and the relief of nervous debility. He thought in many of these cases there was no remedial agent which compared to a full bath at 98 degrees, gradually reduced for eight or ten minutes down to 90 degrees, combined with gentle friction. He spoke of hot baths in cerebral and spinal fever as one of the best methods of modifying the symptoms and course of the disease. He spoke of what Rosenow has termed the "streptococcus rheumaticus," and the fact that this lesion is favored in its development by cold surroundings and inhibited by warm, so that the application of hot packs to affected patients in acute rheumatic fever not only relieves pain, but has a most beneficial effect on the infectious processes. He spoke of warm baths in connection with skin conditions, and he said Hebria's method had proven valuable in the treatment of extensive burns; and referred to the treatment of pemphigus by warm baths, which tend to relieve pain, mitigate fever and restore sleep and digestive functions.

The continuous bath, he thought, was useful in different forms of cerebral irritability, such as acute delirium and mania, and the water bed in cases of bed sores of tabes, myelitis, cerebral and spinal tumors. He spoke of the warm bath and the hot pack, of the sweating procedures in the different types of kidney disease, and he thought the recent recognition of the fact that the effects or nephritis are due not so much to albuminuria as they are to kidney insufficiency in the elimination of nitrogen, chlorides, and water, indicated the advisability of these warm baths in these conditions. He thought applications of hot water were beneficial wherever there was hypertension; these hot packs and baths oftentimes afforded decided relief in these cases and served to gradually reestablish the nutritive and circulatory balance. He did not know of a more effective measure for the relief of distressing headaches of hypertension than the evening hot foot bath. The writer liked the application of dry heat in the form of sand bags and sacks of hot salt and hot bran in cases of neuralgia, myalgia, and other localized pain. The application of dry heat in the form of baking processes in chronic rheumatism was valuable, the only drawback to their more general use being the great expense of the necessary apparatus, which he hoped would soon be made lower.

The writer gave the late Dr. Weir Mitchell credit as the introducer of massage in this country, which has now come to be highly valuable also to reestablish movement in surgical joints and in combating certain nutritional disorders. He thought that a very good knowledge of anatomy and physiology, besides the necessary manipulative skill, were essential to its proper employment; massage increases the circulation, performs a reflex stimulation of the heart, and, by relieving the centers of blood and congestion, greatly aids respiration by lengthening the excursions of the diaphragm. The office of massage is twofold—tonic and stimulant, and sedative. In that peculiar disorder known as visceroptosis, or the displacement of the abdominal organs, due to want of tone, the writer thought massage was practically the only remedial agent, and in these cases a combination of general massage with abdominal massage promised more than anything else; and not only did great temporary good in relief of distressing abdominal symptoms, but also often was of great permanent value.

Referring back to baths, the writer spoke of carbonated baths, the Nauheim, associated with the Schott passive resistance exercises, and the graduated exercises of Oertel, in heart disease. These baths, the writer thought, were responsible for whatever rebuilding there was to be done. While rest lifted the work from that organ and had a soothing effect, and while digitalis and other stimulants exercised an influence in reviving the organ, whatever repair work might be done must be left to these baths. In a general way, the writer did not favor physical therapy in homes, but associated with other therapeutic measures, and therein lay its main argument for a close relationship with the general hospital. He protested against the so-called special institutes for physical therapy, because in such institutions the viewpoint as to disease conditions was of necessity restricted, if not confined to that of the physical therapeutist. He thought that special sects, pathies, and fads were based on the divorce of physical therapy from the general hospital.

The second paper in this symposium, by Dr. Bucholz, was devoted to an account of the work of the physical therapy department of Massachusetts General Hospital, especially in connection with the so-called Zander apparatus, presented to the institution some ten years ago. The writer gave many interesting accounts of results of treatment in special cases, and entered on a description of the uses of physical therapy under different conditions. He spoke of fractures and dislocations forming by far the largest number of cases in which active movement was employed. The recovery of fractures he divided into two parts—the healing of anatomical part and the restoration of the function. He thought not nearly enough attention was paid to restoration of the function in most of these cases, especially in injuries about the joints. He thought

also that fractured limbs were kept too long confined in splints, and that oftentimes greater damage was done by the treatment than by the original injury. He spoke of delayed union in fractures and the vast benefit he had seen accomplished by massage and exercise.

Stiff joints formed another class of cases, including joints affected by operations, wounds, burns, etc. He thought that ten or twelve days after a wound of soft tissues, movement of the part would be safe, and he had seen cases of Dupuytren's contracture, which had been splinted for four or five weeks, in which the limb was almost destroyed past recovery. These cases were mostly in people past middle life. He spoke about arthritis and the restoration of function in the affected joints. The first thing, of course, was to find the focus of the disease, and much was to be done in removing this focus by proper exercise of the part. In acute inflammations violent movement of the parts were contraindicated, and gentle massage applied to the muscles centralwise often decidedly lessened pain, relieved congestion, and aided in permanent improvement. He thought active procedures were unwise in inflammatory conditions, and often irritated and aggravated the trouble. Bier's congestion treatment had often given excellent results in some of these acute inflammatory processes; gonorrheal and other infectious types of arthritis, in which patients had not slept for several nights, were often almost entirely relieved by the Bier's treatment.

The treatment of arthritis deformans formed a discouraging chapter in medical therapy, the writer thought, but physical therapy can accomplish whatever good may be possible; hydro-, thermo-, and balneotherapy, massage, and gentle exercises had often given encouraging results. Though patients usually gain after anatomical alterations have taken place, anything like a cure was out of the question.

Back Cases.—Owing to the investigations of Goldthwait and others in the explanation of sciatica and lumbago, more rational methods of treating these troublesome cases had been adopted. The writer thought it was to be regretted that more of these cases were not submitted for treatment, since the results had been so encouraging. The principal dependence in these cases is massage and movement treatment.

Foot Cases.—About 250 of the 265 foot cases submitted to the department had been of the type of weak, pronated feet; in about 20 percent of these a distinct peroneal spasm was present. He was not thinking about traumatic flat feet and those foot troubles caused by infectious arthritis, nor the paralytic deformities of feet. He did not think much was to be done about typical flat feet, and was not enthusiastic about any course of treatment, and whatever exercise was employed in these cases was educational for the individual patient, in order that he might know how to take care of his feet. In these foot cases pain was not always a contraindication for the exercise treatment. A good many patients with painful feet had been greatly relieved by massage and exercise, while the strength and balance of their feet was at the same time improved. In peroneal spasm, massage and exercise were able to relieve the conditions, but for permanent results he preferred to add strappings and casts, and, later, plates.

Nerve Cases.—The writer thought that physical therapy had been a long time the faithful servant of neurology and could celebrate great triumphs in many classes of cases, but that it could also be most disappointing in other cases, though the indications might seem the same. He said he had seen enough treatment of these diseases to be extremely conservative about prognosis. He generally began most of these cases with general massage and simple exercise without apparatus, with sometimes hydrotherapeutic applications, high frequency static electricity, etc. General massage had given excellent results in severe hysterical convulsions; some cases that had resisted all other means started to improve almost immediately under massage. Exercises with Zander's apparatus has not proved to be efficient in these cases, but were to be highly recommended in the depressive forms of psychoneurosis, although strong personal influence was of great help in these cases.

Internal Cases.—Only a small proportion of medical cases came to the clinic, which is rather remarkable, considering a large number of these cases that attended the clinics of physical therapy in the German institutions of the same kind, and he thought it was to be greatly regretted that American clinicians did not make a wider use of massage and exercise in the treatment of internal disorders, especially since there was abundant encouraging literature on the subject. In heart cases the writer thought that exercise was most valuable after compensation had been reestablished, and that stout persons were better subjects for exercise than slender, anemic ones. He related one case of a patient past middle life, with a severe myocarditis and adipositis, who had recovered in three months by faithful exercise and diet to his full power and strength, and had lost at the same time thirty-five pounds of weight. The greatest difficulty in the treatment of these medical cases was to measure advantageously the amount of treatment to be given, and it required a good deal of discrimination on the part of the operator. It was because of this difficulty that Dr. Zander had planned and constructed his various pieces of apparatus, so that treatment could be measured and distributed properly.

[The symposium on "Air Problems" will be discussed in the September number.]

Announcement was made recently by the Massachusetts Babies' Hospital, Boston, that its work will hereafter be confined to the boarding of babies. It is assumed that the hospital service heretofore rendered the city by this institution will be taken care of by the new Infants' Hospital. The Massachusetts Babies' Hospital was founded in 1868 as the Massachusetts Infant Asylum. As time went on it became evident that housing many little children together in an asylum was not good for them, and that placing each infant or child in a separate home was much better. The society, therefore, began to receive babies whose parents were temporarily unable to take care of them, or who for other reasons could not be cared for at home, and placed them in carefully selected homes, where they were supervised by trained nurses and social workers. With this change in system the building formerly used as an asylum became a babies' hospital and has since been conducted as such.

Following the efforts of the young women of St. Margaret's Guild of the St. Paul's Episcopal Church at Indianapolis to raise a fund for the mural decoration of the two new units of the Indianapolis City Hospital, a number of local artists of distinction have offered to do the work for merely nominal pay, where otherwise it would have cost several times as much. For the children's department the art plan includes studies from well-known fairy tales and stories, children's festival scenes, and a series of life-size medallion portraits of children from 2 to 5 years of age, representing every race and nationality, and every stratum of society going to make up the population of Indianapolis. Landscapes and other appropriate paintings will be provided for the women's and men's wards. The decorations will be on canvas, pasted to the walls, the edges being bordered by a narrow molding that will not catch the dust. It is believed that the pictures will have a positive therapeutic value, especially in the case of the children.

CURRENT HOSPITAL LITERATURE

Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Some Sanatorium Results. H. V. Scarborough. Bulletin Iowa State Institutions, Anamosa, Iowa, 1914, XVI, 18.

The author furnishes interesting tables of stages and results of sanatorium treatment of tuberculosis.

Dedication of Mayer Hall, Central Hospital for Insane, Indianapolis. M. J., 1914, XVII, 207.

Cornelius Mayer Hall, the new recreation building of the Central Hospital for Insane, at Indianapolis, Ind., was named for the faithful secretary of Dr. Edenharter, superintendent of the institution. Its recent dedication was the occasion of an address by Governor Ralston, followed by a reception. The patients were given an entertainment and were also permitted to attend the reception held for Governor Ralston.

Statistical Data on the Use of Salvarsan in Hospitals (Erhebungen über den Gebrauch von Salvarsan in Krankenanstalten). Heilanstalt, Leipsic, 1914, IX, No. 10.

Dr. Drew, health officer of Berlin, recently published an article in which he called attention to the great dangers of the indiscriminate use of salvarsan. The daily press took up the question and created much uneasiness among the people. The matter was even discussed in the Reichstag. To obtain an impartial view on the question and to decide the controversy, the chancelor of the Empire has now sent a circular to all hospitals in Germany, requesting statistical data on the harmful effects, accidents, and deaths attending the use of salvarsan.

The Children's Hospital (Das Kinderkrankenhaus). F. Schönbauer, Wien and Leipsic, 1914.

The author has visited all the noted hospitals for children in Germany. In this little book he gives his observations on the trip as well as his own great experience. He considers an educated and well-trained nursing personnel an important factor in the successful management of a children's hospital. A nurse should not have to attend to more than three infants and not to more than four or five older children. The division for infants should be separated from the other wards, and, wherever possible, placed in a separate building. Large verandas are an essential part of such a hospital, that the modern requirements of the open-air treatment may be fully carried out. The author discusses at length the important question of hospital infections, especially as to scarlatina, measles, diphtheria, and whooping-cough. The most frequent cause of infections are children who harbor the germs of a disease when they enter the hospital. He also found that scarlatina is not infrequently carried by visitors into the hospital, where it spreads rapidly through playthings and objects in general use. As to visitors, he found that in most German hospitals they are allowed to see the children only on two days during the week. This lessens the danger of infection, and the fact that the children are less frequently disturbed is also beneficial to them.

Women's Social Service in Hospitals (Soziale Frauenhilfe in Krankenhäusern). Heilanstalt, Leipsic, 1914, IX, No. 10.

The commission for municipal hospitals and public hygiene in Berlin has accepted a proposition of the Berlin social women workers to establish a systematic social service by experienced women in all hospitals. These women will visit the hospitals on certain days to learn from poor patients (and, if needed, from the nurses and physicians) if their families are, on account of the present sickness, in need of assistance, or if they themselves need aid or advice concerning work on leaving the hospital. If patients are indigent women with children, the latter will be placed in homes until the mother is again able to take care of them.

About Beds (Ueber Betten). Sack. Heilanstalt, Leipsic, 1914, IX, No. 11.

The bed has considerable influence on the course of a disease. A good hygienic bed consists of an iron bedstead, with steel springs, a three-layered horsehair mattress, a woolen cover, two pillows, and in special cases a horsehair cushion. The various plant fibers used in mattresses are inferior to horsehair and should never be used. Horsehair is indestructible and can be cleaned any number of times. To clean horsehair, it is first well beaten, then placed in the tubs and covered with a sheet of cloth. Boiling water is then repeatedy poured over it. The hair is then left standing in the steam for an hour, when it is taken out, dried, and picked loose.

Ship Sanatoriums (Sanatorien auf Schiffen). Heilanstalt, Leipsic, 1914, IX, No. 10.

The executive committee of the German Society of Thalassotheraphy has recently addressed a circular to the leading representatives of internal medicine to obtain their views on the question of ship sanatoriums. The society has for some time past endeavored to establish such sanatoriums, but the leading ship companies always declined participation in the undertaking. Two types of ships are considered necessary, medium-sized steam yachts for patients with diseases of the respiratory organs, of the nervous and vascular system, and for convalescents. Another type needed is sailing ships for patients with pulmonary tuberculosis. It is believed that these sailing ships would not be more expensive than a medium-sized tuberculosis sanatorium on land.

Adaptation and Transformation of Hospital Wards in Old Hospitals as Special Divisions for Consumptives (Adattamento e riduzione di sale ospedaliere nei vecchi nosocomi a riparti speciali per tisici). Arch. di scienza ospedal., Bergamo, 1914, IV, No. 4.

To establish a division for consumptives in an old hospital does not mean to simply select a certain number of rooms for tuberculous patients, but it means to create a hospital division which fulfills all the requirements of modern hygiene for a chronic infectious disease. The fundamental principles to be considered are air, light, space, cleanliness, and isolation. Wherever possible, the rooms for tuberculous patients should be located on the second floor, and, if possible, with a southern or south-

eastern exposure. As to space, 40 cubic meters should be the minimum for each patient. As to the kind of illumination, gas should be entirely discarded, as it vitiates the air. The electric light is the only kind of illumination that fills the requirements of modern hygiene. To enable the patients to enjoy the advantages of the open air at all times, the rooms should be provided with large covered verandas. As to isolation, such a division must be completely separated from the other hospital wards, and it must have its own entrance from outside, where only the tuberculous patients are permitted to enter. The nurses must be specially selected for this service. They must be intelligent, educated persons, who are versed in the fundamental principles of bacteriology and hygiene.

The Milanese Permanent Sea Hospital on the Coast of Massa (L'ospicio marine permanent milanese alla marina di Massa). C. Hajech. Ospedale Maggiore, Milano, 1914, II, No. 1.

Recognizing the great value of the sea climate as a therapeutic agent, the city of Milan has recently decided to erect a hospital on the sea coast, and 1,160 hectares (2,900 acres) on the coast near Massa, northwest of the city of Pisa, have been purchased for this purpose. The grounds have a coast frontage of 500 meters, and the rear portion is covered with pine woods. The locality is well protected from the north wind by a spur of the Apennine Mountains. The hospital will be built on the pavilion plan. One pavilion is already under construction, and more will be added as the means permit and the necessities require. The pavilion now building is to be a very large structure, with a central body and two wings. It will have twelve dormitories, six of 19 and six of 9 beds each. These dormitories are all located in the side wings, one side being intended for the men and the other for the women. The building is provided with numerous large verandas to enable the patients to make full use of the sea air.

The Need of a State Detention Hospital for the Early Diagnosis and Treatment of Acute Mental Diseases. F. M. Terflinger. Jour. Indiana Med. Assn., Ft. Wayne, 1914, May 15.

The author acknowledges the failure to reach the highest degree of efficiency in state institutions cannot be attributed to the management of hospitals, as conditions arise before the cases reach the hospitals or come under the care of its staff. He maintains the public hospitals for the insane will not accomplish the greatest good to the greatest number until the statutes are so reconstructed that patients can be admitted to such institutions for diagnosis and treatment for short periods without the formality and delay accompanying legal commitment. It has been suggested long ago that there be erected in connection with each hospital for the insane a reception observation hospital, properly equipped with modern therapeutic appliances, laboratories, etc., where patients can be admitted with no more formality than now exists in any other hospital, to be cared for until their discharge or legal confinement.

A Typical Modern Hospital for the Insane—The Hospital of La Brentonnière (Un type d'asile de La Bretonnière). A. Antheaume. Informateur d. aliénés et neurol., Paris, 1914, IX, No. 1.

The Department of Siene-et-Marne has recently made an appropriation of 3,500,000 francs ($700,000) for the erection of a new hospital for the insane. It is to be a model institution. Work has already commenced, and the new hospital is to be completed toward the end of 1916. The grounds, located near Coulommiers, about 50 kilometers east of Paris, comprise 100 hectars (250 acres), consisting partly of woodland and partly of arable land. The hospital, planned on the pavilion system, will have room for 450 patients, and will consist of twelve pavilions for ordinary adult patients, two pavilions for patients requiring special treatment, one pavilion for the medico-pedagogical treatment of curable children, and ten pavilions for the general services, workshops, administration building, and dwelling houses for the functionaries. The institution will have all the functions of a hospital, an asylum, an agricultural colony, and a sanatorium. In classifying the patients, two chief divisions are made—acute and chronic. The former, who have always a chance to be cured, come under the hospital service proper, and others under the asylum and labor service. The acute patients are again divided into two services—the admission service and the treatment service; the first receiving all the new patients who are supposed to be curable. After a certain time of observation and special treatment the patients are either discharged as cured, or they are so much improved that they can be transferred to the treatment service, or they are sent to the asylum division. No isolation pavilion for infectious diseases has been provided for. It was thought best to establish isolation rooms in the different pavilions. The chronic and incurable patients are divided into violent, noisy, quiet, and idiotic (gateux) patients. The violent patients will be placed in two neighboring pavilions, one of which will receive the dangerously insane. These two pavilions will be surrounded by inclosing walls. The quiet patients, who form the great majority of insane, will be employed as laborers in the field.

The Voluntary Hospital—On Its Trial. G. H. Hume. Hospital, London, 1914, LVI, 350.

The author proposes to inquire into the working of the voluntary system in the support of hospitals of the past and present, and to base on the inquiry a future forecast; that, while agreeing with Sir Henry Burdett that "the voluntary system of hospitals is one of the glories of the world," there is a belief, as much in the mind of the general public as in that of hospital managers, that in England methods call for readjustment. The waves of philanthropic enthusiasm have their ebb and flow. The same experiences have been gone through where voluntary hospitals have been established and maintained. He cites as two main drawbacks the fitful and uncertain character of voluntary giving, and, secondly, its often tardy response to special needs, as when reconstruction or enlargement is urgently needed; that voluntary giving is too largely dependent on emotion, on varying interest, on shifting circumstances and influences to be entirely reliable for hospital work. Again, inefficiency in the hospital is often itself the source of public apathy—that timidity is the worst fault in hospital administration.

A confident doing of best possible work he regards the only way to command a willing support. The growing independence of the classes from whom hospital patients chiefly come, and the decline of interest in hitherto hospital supporters, is largely the source of present difficulties. The insurance act makes no attempt to supply an increased demand which it has helped to create; it provides mainly for treatment of trivial ailments, while leaving the serious cases to be dealt with as they can by the voluntary hospitals. The panel doctor, while exempt from surgical operations or expert work, is relieved of responsibility when he advises the patient where he is to seek the help needed, generally to a voluntary hospital, with a growing waiting list—a burden the insurance act tacitly

throws on the voluntary hospital. More subtle still is the insurance scheme in precipitating the change of mutual attitude of givers and recipients, one that holds out in theory at all events the promise of an efficient medical and surgical assistance in return for payments made; it acknowledges the right to claim what was once a matter of charity. The change of attitude is complete when the hospital looks to the recipients of hospital benefits for substantial hospital support. Conditions in hospital affairs in England have reached the stage where the ever-increasing working deficit gives hospital committees much alarm. The writer does not believe in radical change, but would advocate a reenforcement, not the abandonment, of the voluntary principle—the establishment of organized methods and reliable support. On the voluntary system Sir William Osler is said to have advocated giving it up, that it is antiquated and out of date, and is not going to continue, practically advising "get money where you can," and recommending pay from patients. The exaction of payments from patients is being adopted in many hospitals. An interesting discussion follows the paper in which there is a general concurrence of belief that hospitals should be conducted on business lines, expecting payment from all who can pay. The trial of voluntary aid has been brought about not in the sense that it had been a failure, but that it had to face the burden of national insurance.

Maternity Hospital Care for the Woman of Moderate Means. Geo. W. Kosmak. Bulletin Lying-in Hospital, New York, 1914, IX, 201.

With the growth of modern hospital accommodations and the abolishing of former prejudice against lying-in hospitals, we are having an increased demand for the accommodation of patients of limited means—those who can afford and are willing to pay proportionately on an average of $10 to $15 per week. Ample provision is made for the wealthy and the charity patient, while our patient of moderate means, who, through lack of proper facilities and likewise cost of proper attention at the family residence, seeks refuge in a hospital during her confinement to find the public ward or quarters, with several others in a hospital, her only alternative, a condition of affairs that oftentimes influences the birthrate in either preventing conception or inducing abortion. Such an institution would prove a refuge for confinement and alleviation of the terrors of childbirth. Unfortunately the obstetrical standards among the profession are not high enough to compel proper equipment for obstetrical cases, and, when skilled assistance is urgently needed, hospital aid is finally sought. The establishment of such institutions would prevent the misuse of charity, and appeal to a class of patients who are not seeking charity service, and yet could afford only a nominal fee, whose home environment may be such that delivery would be accompanied by unpleasant or dangerous consequences. Another feature of importance in the residence of obstetrical patients in a hospital are the opportunities afforded women of observing the manner of care of themselves and babies, a valuable object lesson in accordance with present-day ideas. From a correspondence with thirty-one obstetricians of various institutions, the writer learned that but nineteen offered accommodations at $15 or less per week; the latter rate generally referred to wards. From well-known gynecologists and obstetricians he also learns that no provision whatever is made for caring for this class of patients in institutions with which they are connected, and the consensus of opinion was in favor of the introduction and development of a system of this kind. A provision for pay patients in moderate circumstances should be a feature of a modern hospital occupying good standing in a community. In attempting to solve the problem, certain factors are to be considered; the attitude of the physician in general practice toward a scheme of this kind; the standpoint of the hospital as to such facilities being economically provided, and not to interfere with other work of the institution. Each community must solve its individual medical problems. This question the author believes to be one that will require gradual elucidation and working out, though, for the present, provision might be made by the modern hospitals to provide a much needed service of this kind.

Advantages of Institutional Treatment. Geo. F. Butler. Medical Times, New York, 1914, XLII, 216.

The preeminently essential reason for institutional treatment is the fact that through its agency alone is found the necessary equipment for applications of the various hydro-mechano and electro-therapeutic measures which obviously cannot be installed in private homes or even in the office of the general practitioner.

In the modern sanatorium opportunities are found for determining with almost mathematical precision the exact condition of each patient; dynamometers to determine the strength of each muscle group; ergographs to demonstrate effect of various therapeutic measures on resistance of muscle fatigue, an invaluable instrument in neurasthenic cases; spirometers to determine to a cubic inch the capacity of the lungs; sphygmographs, sphygmomanometers, tonometers, the x-ray, and various electrical and other appliances for making accurate diagnosis, the repeated and intelligent application of which demonstrates with mathematical nicety the results of treatment, whether improvement or retrogression. The value of system, advantages of a trained staff, influence of change, diet, sanitation of living rooms, the social advantages of sanatorium life, and climatic environment, are all subjects worthy of careful consideration in institutional treatment. The mental effect of sanatorium life becomes a potent aid when the patient has been assured by the physician that he will surely recover or at least be greatly improved by the care, diet, climate, treatment, etc., he is to enjoy at the institution. The atmosphere of a sanatorium should be one of hope and cheerfulness; from the medical superintendent to the bath attendant should come an inspiration to every patient. It is becoming more evident, with a deep knowledge of the etiology and progress of disease, that even the greatest disorders are in a measure subject to mental control. The writer classes this phase of therapeutic effort among the most promising aids to success in the treatment of disease—not only in sanatorium, but in private practice. Above all, a veritable broad, scientific spirit should pervade the entire management of an institution for the treatment of sick people. Separate factors, such as "fads," may be potent in some cases, but any single method of treatment cannot scientifically be applied to all cases. A sanatorium, therefore, to deserve the respect and confidence of the medical profession and laity as well, must have in the medical department physicians of recognized character and ability, who will conduct the institution on a liberal and strictly scientific basis.

El Paso, Tex., is soon to have a new $125,000 sanatorium. The enterprise is promoted by a corporation known as the Hendricks Sanatorium Company. R. D. Harvey, formerly of Cleveland, Ohio, will be president, and Dr. C. M. Hendricks, of El Paso, vice-president and secretary. Dr. Hendricks will have charge of the institution as medical director. One of the features of the new building as planned will be a private porch for each room instead of one long porch for all the patients, as is the general custom.

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HOME-MADE HOSPITAL APPLIANCES

An Aid Toward Quiet in the Operating Room.

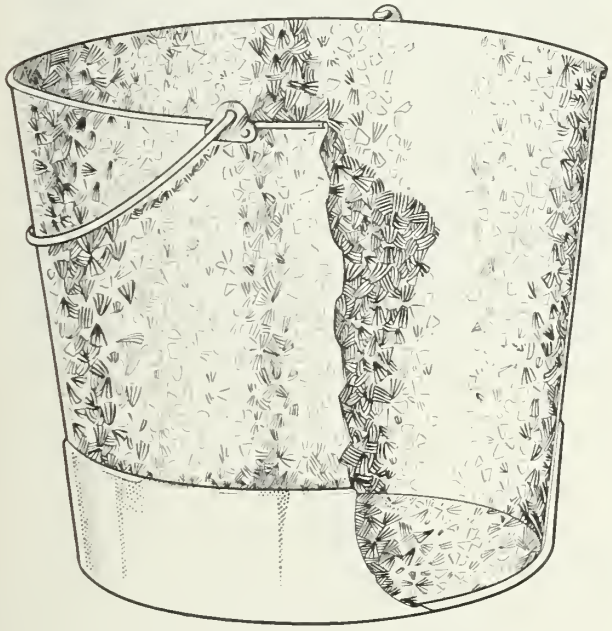
JOSEPH B. HOWLAND, M. D., ASSISTANT ADMINISTRATOR MASSACHUSETTS GENERAL HOSPITAL, BOSTON.

All of us are familiar with the noises which we find in the operating room, especially in those of modern construction, with tiled floors. Anything that can be done to lessen these noises is always welcomed by surgeons and superintendents.

Agateware pails are generally used for dressings, etc., and if moved even slightly on tiled floors cause a great deal of noise.

The following "silencer" has been found to aid considerably in this direction at the Massachusetts General Hospital:

It is of white rubber, and for durability the bottom is



Pail silencer, showing method of attachment.

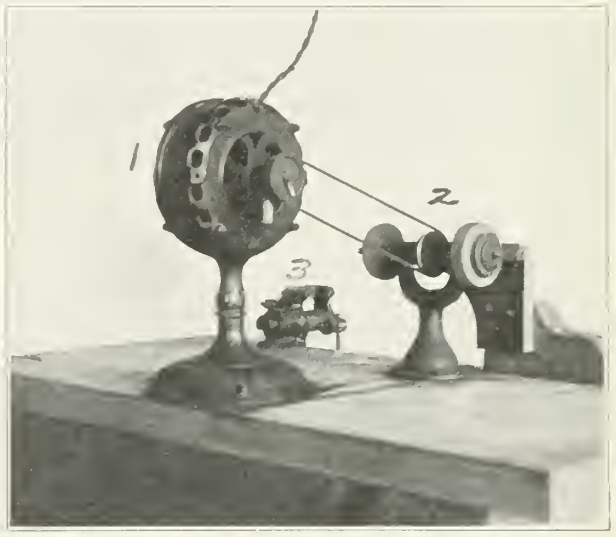
about ⅛ inch thick, the walls 1-16 inch thick, and extending up the sides of the pail about 2½ inches. The rubber composition appears to be that generally used in douche bags, hot water bottles, etc. If closely fitted, such a silencer will stay on by suction. It is easily cleaned with cold water and soap, and fully accomplishes the purpose for which it is made.

Estimates were asked for from various rubber concerns, many of which stated that a mold would have to be made at a considerable expense. The Davol Rubber Company, of Providence, R. I., made our silencers. They were fitted by hand to a sample pail, no mold being necessary. It is, of course, advantageous to have a standard size pail, as the rubber is not elastic. The price is reasonable.

Knife and Shears Sharpener.

ASA BACON, SUPERINTENDENT PRESBYTERIAN HOSPITAL, CHICAGO.

1. Electric fan. Remove fan blades and install a 2-inch grooved pulley. An ordinary pulley, such as carpenters use in windows over which to run the weight cord, will do.



Bacon's knife and shears sharpener.

2. Dental lathe, with a fine corundum and polishing wheel attached. This can be procured from any dental supply house. Use an ordinary sewing machine belt to run from motor to lathe.

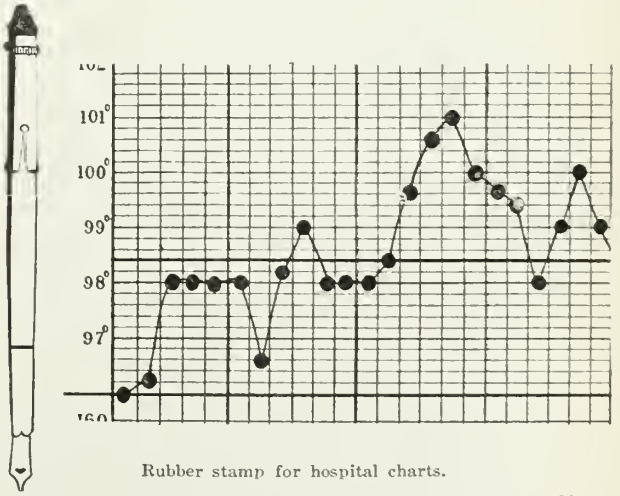
3. Vise used for straightening and adjusting scissors.

An hour a week by your carpenter or handy man will keep your scissors in fine condition. The cost is about $16.

A Rubber Stamp for Hospital Charts.

LESTER ADAMS, M. D., RESIDENT PHYSICIAN CITY HOSPITAL, BALTIMORE.

The accompanying sketch illustrates a rubber stamp attached to a penholder by a metal clasp ordinarily used to hold a pencil eraser. The purpose of the stamp is to make dots representing the degree of temperature and



Rubber stamp for hospital charts.

rate of pulse and respiration on a hospital chart. "Charting" is a time-consuming operation, and the necessary exactness and monotony often make it a very tiresome part of a nurse's work.

In wards similar to those of the City Hospital, Balti-

more, in which the device shown has been used, where there are 50 patients with numerous "q. 4. h." charts, the work previously consumed from two to three hours each day of one nurse's time. Dots made with a pen are often far from uniform or round, and frequent smooches and blots occur. The stamp reduced the time about one-half. After the records of the day previous are stamped on the sheet, the penholder is reversed and connecting lines drawn. The dots themselves offer no chance for blots, and are uniform. One color of ink is used, but, if two colors are desired, two stamps may be used with equal profit. The stamps which have been used for the last six months were obtained from Baumgarten & Co., Baltimore, at a cost of 15 cents each, and the small ink pads cost 10 cents each.

Device for Sterilizing Tap Water.

DR. A. R. WARNER, LAKESIDE HOSPITAL, CLEVELAND.

When Lakeside was built, one operating room was equipped with a still to distill water by gas burners, condense it into a storage tank, and then conduct it to the sterile water tanks in this operating room through block tin pipe. The other operating rooms were equipped with the ordinary sterilizing tanks, which were supplied with filtered city water. One method was about as much trouble as the other. The distilled water, after reboiling in the tanks in the operating room, would be perfectly clear, but the distilling apparatus was always making trouble. If the boiler was not cleaned often, the scale would get thick enough to froth up through the condensing coil and the mud would get into the whole system, the bottom of the copper boiler easily burned out, and something was always leaking. Complaints from the other operating rooms with the ordinary tanks were constant. The lime precipitated by boiling tap water made the water always look dirty, the tanks required frequent cleaning to prevent the collection of this boiler scale, and the filters required constant attention to keep out the real mud of the city water. The still in the first operating room worked well often enough to make everyone using the other ordinary tanks dissatisfied with their equipment.

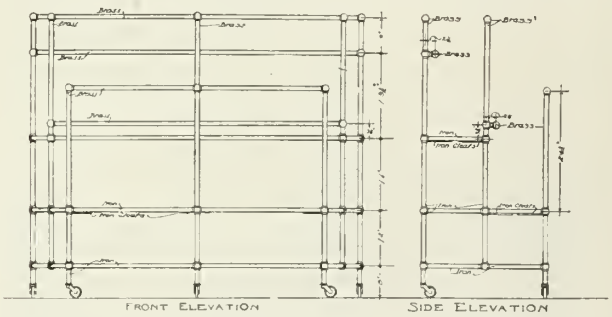
To get distilled water without the troubles from distilling it seemed the ideal. The method finally adopted is entirely successful, and may be new to some hospital administrators. We had live steam from the boilers at eighty pounds pressure in all the operating rooms, and a local firm had no difficulty in constructing a reducing valve to reduce this pressure to practically atmospheric pressure. We connected the steam line through one of these reducing valves directly to the condensing coil of the original apparatus. The water came out cool enough to give off no vapor, and the storage tank could be filled much more rapidly than before. To fill the tank, the nurse simply opens the valve on the steam line and the valve on the cold water line to the condenser. As the supply of distilled water was now ample, the other tanks on this floor were connected to it by block tin piping. This outfit has now been used nearly three years without any trouble of any kind. The cost of the reducing valve was $25.

When the new operating rooms were built on the second floor, a similar outfit was designed and installed. The condensing coil was placed in the attic over the sterile water tanks, and the storage tank suspended from the ceiling just over these tanks, so that the amount of tin piping necessary be as little as possible. The condenser, cooler, and storage tank were made of copper tin lined, and the piping from the storage tank to the usual tanks for resterilization and use were of block tin. The storage tank has an air trap to filter the ingoing air when water is drawn out, so that the water direct from this tank is practically sterile, but it is always boiled in the regular operating room tanks before using. From the steam and cold water connections in the operation room the cost of the piping, valve, condenser, cooler, storage tank, and connections to the ordinary operating room tanks, all installed, was $160.

We were surprised to find this outfit able to produce twenty gallons per hour of cold distilled water at practically the temperature of the cooling tap water, a capacity beyond our needs. An equipment having sufficient capacity to supply such amounts as are really needed in the operating room, and without complete cooling, which is unnecessary if all this water is reboiled before use, would therefore cost less. This apparatus has now been used over a year without any trouble or attention whatsoever.

Standardized Home-Made Appliances.

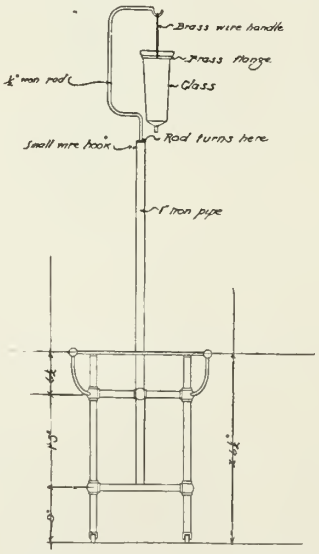
The devices illustrated here were first published in a small pamphlet issued by the Massachusetts General Hospital several years ago during the superintendency of Dr. H. B. Howard, now at the head of the Peter Bent



Observation stand for operating room. Originally designed for the Massachusetts General Hospital, now in universal use.

Brigham Hospital. Dr. Washburn thinks the pamphlet was published about 1906.

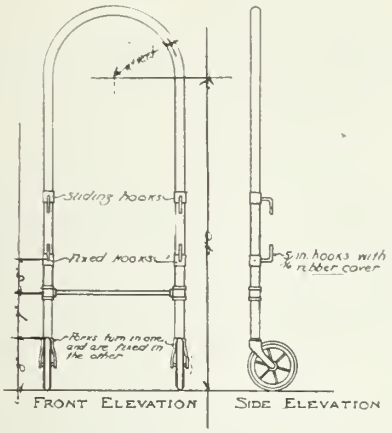
"There was no claim to originality in any of this furniture, although some of the devices were worked out in



Irrigator stand. Originally designed for the Massachusetts General Hospital, now become standardized.

this institution," writes Dr. Washburn in sending a copy of this pamphlet to THE MODERN HOSPITAL. A note in the pamphlet states that "some of the things have been

copied bodily, and the ideas for many others were picked up while visiting sister hospitals."


sliding hooks
fixed hooks
8 in. hooks with ¾ rubber cover
Rods turn in one and are fixed in the other
FRONT ELEVATION
SIDE ELEVATION

Bed truck. Originally designed for the Massachusetts General Hospital years ago, now become standardized. We all know this "bed truck."

These devices, taken from a pamphlet now almost ten years old, are reproduced, not so much for their present value, but for the purpose of showing how home-made

Soiled clothes container and utensil rack. Originally designed for the Massachusetts General Hospital, these devices can be recognized in the standard makes of today.

appliances have crept from an obscure place in a single hospital to a recognized position among standard articles sold by the manufacturers today.

At a recent session of the Women's American Baptist Foreign Mission Society in Boston Mrs. Harriett Jones, of Philadelphia, gave $1,000 to be used toward the purchase and equipment of a hospital boat for the foreign mission service of the church in the far East. "Our mission boats on the rivers of China, India, and other lands are doing wonderful service," said Mrs. Jones. "They are invading regions that the ordinary mission stations cannot be expected to cover. The great necessity now is a hospital boat, by the aid of which our river missionaries will be able to care for the bodies as well as the souls of the heathen with whom they are brought in contact."

The Colorado State Board of Control has readjusted the wage scale of the State Hospital to conform to the union wages paid by employers in private work, deducting for room, board, laundry, medical service, and 10 percent on account of continuous employment. Painters, upholsterers, plumbers, carpenters and steamfitters, who heretofore have been receiving $68 a month, will under the new scale receive $80 a month; masons, who have been receiving $68 a month, will receive $90 a month; blacksmiths, who have been receiving $68 a month, will receive $75 a month. Proportionate increases have been made in other departments.

NEW INSTRUMENTS *and* APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

Electrically Heated Warm Stage for the Microscope.

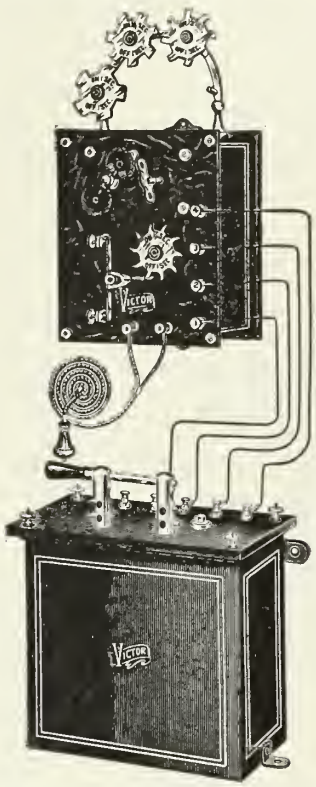
This electrically heated stage makes it possible to maintain a uniform temperature of the microscope stage. It consists essentially of a small heating unit thermostat and thermometer, all of which are contained without the circular disk, which measures 3½ inches in diameter by ½ inch in thickness. The disk may be placed in any microscope stage, and after once regulated there is no change in temperature of the culture.

The advantages of this device will be readily observed by laboratory workers, since it is possible to maintain body temperature for specimens under observation. It should be especially valuable in examining amebæ malarial organisms, spermatozoa, and in fact all living organisms which lose their motility when cold. The device can be used in connection with any microscope and is operated on an ordinary lamp socket.

An Automatic X-Ray Timer.

The manufacturers have named this device the teleflasher, the purpose of the apparatus being to control automatically the exposure time of a roentgen tube. The device consists of two units—the circuit breaker switch, which opens and closes the primary of the x-ray generator, and the timer, which is built on the relay principle for controlling the circuit breaker. The actual work of opening and closing the breaker switch is accomplished by two solenoids which are in direct engagement with a

switch, both switch and solenoids being insulated in oil. The timer is contained in a separate metal case, which may be placed at any desired point. A spring motor operates the timer, and is provided with a governor or time regulator, which the operator controls by simply turning to the right or left. After once set, this controller requires no further adjustment. In order to select the time of exposure to a small fraction of a second, or for as long a period as may be desired, timing wires are used. These wires are clearly illustrated on the bracket shown in the upper portion of the illustration. Lugs project from the wheels, and act as cams when they come into contact with a spring, which is a part of the relay operating the electrical contacts. Thus, when the operating lever of the apparatus is raised by a cam as it revolves, current is caused to flow through one of the switch operating solenoids in the circuit breaker box. This solenoid in-



stantly closes the circuit breaker switch, which remains closed so long as the lever on the timer is passing over one of the cams, the roentgen tube being excited during the period required for one of the cams on the timing wheel to pass under the lever. As the cam leaves the operating lever, the current instantly ceases to flow through the closing solenoid in the circuit breaker switch box, and is caused to pass through the opposite solenoid, which opens the circuit. A spring motor is used for actuating the time wheel. By selecting the time wheel for the proper exposure required, one can measure exactly the right exposure and control the apparatus from any point desired; or if, for instance, in using the fluoroscope the operator wishes to do his controlling with a foot switch, an adjustment may be made whereby the current passes so long as the circuit is held closed with the foot.

Dr. Harry J. Bartron, who has been conducting a sanitarium at Watertown, S. D., for several years, has announced that he will soon erect a $50,000 building. Dr. James Benjamin, of New York, x-ray and laboratory expert, will be associated with Dr. Bartron in the new building.

DEPARTMENT *of* NURSING

Mary M. Riddle, R. N., Editor,
Superintendent Newton Hospital, Newton Lower Falls, Newton, Mass.

Ethics of Nursing.

BY GEORGE E. MAY, M. D.,
Surgeon to Newton Hospital and Chairman of the Executive Committee.

Nearly two thousand years ago the greatest Teacher the world has ever known laid down a rule for human ethical action which embraces everything and fixes a test by which we may know the road. The golden rule, "Whatsoever ye would that men should do to you, do ye even so to them," I do not expect to make any clearer, and shall be glad if I may only suggest some possible methods of its application to the nurse's walk in life.

Theoretically, all we have to do, if in doubt as to a course of action, is to ask ourselves this question, "What would I want done to me under similar circumstances? Let me put myself in the place of those whom my action is about to affect, and ask myself, 'What do I want?'" Practically, we all must agree that this is often difficult. In the first place, we do not always know what the environment and conditions of those about us are. If we did, we might not, on account of our widely different tastes and experiences, be able to appreciate them. It is difficult for the laborer to appreciate the position of the capitalist, and equally hard for the person who has never worked for a living to appreciate the desires and limitations of those who are dependent on manual labor for their existence. Unless the capitalist has come up from the ranks, it is very difficult for him to put himself in the laborer's place, and, even if he has, he may have forgotten much of his former estate. So it is easy to say, "I would like so and so if I were you"—but would you? It really is not so simple, and often requires the exercise of finest discrimination and taste.

True ethical conduct is far removed from selfishness, even though one's own rights are always entitled to respect. We are all trying—all making mistakes. Some one recently said,

"God sent us here to make mistakes, to miss the path, to go astray,
But searching, praying for the light, until at last we find the way.
Who fumbles once, walks then with care, and knows the place to cry 'Beware!'
To other unaccustomed feet."

"If to do were as easy as to know what were good to do, chapels had been churches, and poor men's cottages princes' palaces. It is a good divine that follows his own instructions. I can easier teach twenty what were good to be done, than be one of the twenty to follow mine own teaching."

In the great profession of nursing, its greatness for nurses limited only by what they put into it, there are many-sided relations, and the following are a few of them:

1. Relation to the hospital in which the nurse trains.

2. To her sisters in the profession.
3. To the medical profession.
4. To the community which she serves.

1. Hospital Relations.—No matter how hard the trustees, executive committee, medical and surgical staff, superintendent and assistants may strive to build up a hospital, it can never be a success without the nurse. She touches the community more intimately than any other factor in the hospital, and it is through her that its reputation for usefulness must either be maintained or fall. She should remember this always. She should be as jealous of its reputation as of her parents', and see that no word or act of hers does anything except to enhance its interests—hence her dignity, professional skill, her kind sympathy, and her cheerful atmosphere will all come back to the hospital; it has in the past, it does now, and will continue to do so as long as she reflects on the hospital the light which she carries. If people believe in her, they will believe in the hospital. They will come to it for help, and in time will, whether rich or poor, help it again. The hospital is always proud to hear of the executive work of its nurses in other institutions, of self-sacrificing devotion to settlement and social service work, or of the charming heads of new homes which some make, and the devoted mothers seen here and there among its graduates. So nurses should always be careful of their alma mater. Decatur's toast can be changed a little, but let it apply: "Gentlemen—our country! May she ever be right, but, right or wrong—our country!"

When a nurse comes back to the hospital, either temporarily or permanently in some executive position, as first, second, or third assistant, then her relationship to it becomes even closer and her opportunities for serving it become correspondingly enhanced. Then she will see that, no matter how rich and overbearing, or how poor, discouraged, or uncouth an individual, he will not go away with anything but a distinct impression that the hospital stands for sympathy, kindness, and service. If she comes back to it on private duty, she will see to it that her own patient is well cared for, and also that her own stay there is so conducted as to make the least possible trouble for everybody. It is not necessary to go into details of what is becoming for her in this relationship, for nurses probably understand that, but I would simply emphasize its importance. The statement was made last year in a paper by a very prominent superintendent of nurses that "the average nurse, five years after graduation, has rarely any feelings of loyalty or devotion to the hospital, its traditions, methods, or its doctors, and is much given to telling the pupil nurses how things should be done. She indulges in much visiting and criticism, and shows a lamentable lack of wisdom and dignity." This may be the experience in the hospital of this superintendent, but it is not true of all hospitals.

2. Her Sister Nurses.—We hear now and then of medical pirates, those who are said to steal the patients from their colleagues; probably there are none in the nursing profession. Personality is such a delicate thing! Who can tell why some adore a nurse and think she is the only one alive worthy of the name, and others are so different. A man used to say to me, "Well, it is a good thing we don't all think alike, else everybody would want my wife and I would not stand much show." One can see how the personality of the nurse affects her work, as that of the physician—sometimes more than the actual effort expended. With some she may be conscious of having done a great deal and no appreciation is shown; with others she may have simply been an onlooker or companion and yet at the zenith of their admiration. Hence, when a nurse finds herself preferred to one of her colleagues, she should not be "puffed up," but spare her feelings, be the perfect self-forgetting sister, and everybody will be much happier. Here, perhaps, she can better understand both sides of the situation, and so apply the golden rule more intelligently and more perfectly than anywhere else. When two graduates from different schools are associated in the care of a patient, each should regard it as an opportunity to broaden herself, and perhaps learn new methods in her work. It may sometime happen that the nurse who has been called in last may please the patient better than the one originally in charge, so, when the times comes for one of them to go, the second nurse may be notified to remain. Such, however, should never be resented by the first nurse, nor should it give cause for undue self-satisfaction on the part of the other, for with the next patient that decision may be practically reversed. Remember, it is always the patient's privilege to choose. Never speak ill of or criticise a colleague to either doctor or patient. If she is not all she might be, let them find it our for themselves. If, however, certain acts have been committed which are likely to reflect on other nurses or on the profession, one can deal privately with such cases with much better results. I think it is generally understood that when two or more nurses are engaged to take care of a patient, it is the rule that the one who arrives first is to take care of the case, the second acting as her assistant. If, owing to temporary absence or illness, a nurse has been called on to assume the duties of a colleague, on the arrival of the other nurse she should resign, as the patient really does not belong to her.

3. To the Medical Profession.—I wish that doctors were all right every time—always just, fair, sweet-tempered, gentle, kind, and self-forgetful—and there are some I know and honor who really seem to pretty nearly reflect these virtues. But they are human—subject to worry, temptations, friction, jealousies, etc., so at times they may be most vexations and hard to please, but nurses should remember that as a profession they are most intimately allied. Sometimes it seems as if the medical profession were the dependent one. Doctors admire, depend on, and love nurses, no matter how cross and disagreeable they may seem; so take them as they mean and not as they look, act, or say. The nurse should look out for the doctor's reputation as she does for the hospital's and for the members of her own profession. The doctor may make mistakes. The nurse should warn him gently and in private when she thinks he does, and he will thank her at last, if at first he seems to resent it. She should be frank with him. Let him understand her own limitations if he seems forgetful of them, but show him in every way her loyalty, enthusiasm, and appreciation of every opportunity for service, for the patient, the doctor, and the nurse have very many vital interests in common. The nurse should ask questions, and become intelligent about special situations and occurrences. The doctors want her to know and should never be impatient at honest inquiry. She should cooperate, be loyal, true, alert, keep up her records, follow instructions to the letter if possible, but, after all, she should use her brain and her discretion, else what are they for? Above all, she should recognize here, as everywhere else, that there are professional secrets and confidences that must come to her notice. It was said of Count Von Moltke that he could hold his tongue in seven different languages. Well, the nurse must go him seven better at times. I once had a case where I told the nurse before she went into it a very important and delicate fea-

ture of the case, and charged her that no one but herself and I had any right to know it. Imagine my surprise and chagrin when, a few days later, in talking with another nurse, I found that she knew the whole story, and on inquiry she told me that nurse No. 1 had told her—of course in confidence—the wretched tale. That nurse has not since been employed by me, and there have been other instances where her unworthiness has been portrayed. Nurses should not talk about their cases. If there is not anything else to talk about, they should either hold their tongues or devote themselves to the weather. When a doctor wants her, she should go if she can. When she wants him, call him. It is the highest compliment ever paid me to be called to a nurse when she is ill, and I am sure all doctors feel the same way. On all occasions, as nearly as possible, the nurse should be accurate in her statements of a patient's condition, and study to be brief. The doctor should write his orders, and then translate them if she cannot read them. The importance of having orders written by the doctor himself may be illustrated by this little story. A clergyman, a few years ago, was met on the street by a young man who told him that he was to be married on Thursday, the seventh of the following month, and wished him to officiate at the wedding. The clergyman took out his notebook, but, having no pencil, the young man took the notebook and wrote in his own hand the date. On the day before the "happy day," as recorded in the clergyman's book, he met the young man, who coolly remarked to him, "Well, where were you last Thursday evening?" "Why," he said, "I don't recall. Why?" "Well, I had you engaged for my wedding and you didn't show up, and put us in a very awkward position. We had to get somebody else." The clergyman was naturally much chagrined, and hurriedly took out his notebook and handed it to the young man, where in his own handwriting was recorded the date of a week later than the wedding had actually occurred. The doctor might be very sure, in his own mind, that he told the nurse to do certain things. He might not have said so, or she might have misunderstood him. If the order is recorded in his own handwriting, there is not much chance of his blaming the nurse for any error. It should be remembered that in all cases it is the doctor who is held responsible. The nurse's theories, whatever they are, possibly even better than those of the doctor, must be put aside. A good doctor is sometimes a poor nurse; don't think that the nurse might not just as often be a poor doctor. She should be very careful not by any word, act, or look to cast any discredit on the doctor; neither "damn him with faint praise." If she doesn't like him or his methods, let her refuse later on his cases. If the family asks questions as to the advisability of certain treatment, refer them always to the physician. The right man will always be loyal and helpful to his nurse, telling her in private or by note of any changes in methods or in policy he thinks advisable.

4. Relation to the Public.—We have to consider here relations to the patient, the patient's friends, and then to the community as a whole, which, of course, must be left to experience, the only thorough teacher, and to the tact and adaptability of the individual. Remember the nurse's first duty lies with the patient. If it were not for the patient, the nurse's services would not be required. So, by her kindness, firmness, gentleness, adaptability, and tact she makes herself worthy of her uniform. Some patients need to be repressed, others need to be entertained; all need to be convinced of the nurse's devotion and single-hearted interest and womanliness.

I cannot speak too strongly concerning the nurse's habits. Some one has said that "habits are the paths of the mind"—that is, the accustomed ways in which our thoughts run make, so to speak, little paths amid the brain cells, so that each time we do a thing it is a little easier to do it another time. Hence the importance of cultivating the best habits, and of doing away with those that are undesirable, so the nurse should be careful that all her thoughts are the right kind of thoughts, because they give rise to the actions and to the words by which she is known among her fellow-people. Christian Scientists have a very beautiful way of putting this, and say that angels are simply good thoughts. So, if we want to be angels on earth, we simply think good thoughts about those in whom we are interested; above all, have good thoughts of ourselves. Under habits might be catalogued a long list of desirable topics. One might speak about voices. Very important indeed is the cultivation of a pleasing tone. We all know people who have speaking voices which we enjoy hearing almost as much as we do some people's singing, and others whose voices rasp on us, no matter what they may say. Now, I believe that much may be done along the line of cultivation to subdue and make attractive this feature of one's personality. We all remember the voice of one of Shakespeare's women, "Her voice was ever gentle, soft and low, an excellent thing in woman." Above all things, a nurse should not whisper in the presence of a patient. If she has anything to say which the patient should not hear, she should get well beyond earshot and then talk aloud about it. If the patient hears her whispering, he is almost sure to fear that she is saying something unfortunate or fearful about his condition, and will be correspondingly anxious. Avoid taciturnity also. Dr. Osler speaks of a nurse in a hospital in Ontario a week after he had graduated from college. There he said he met for the first and only time the incarnation of the spirit of taciturnity in one of the ward nurses. He said she was taciturn to such a degree that she never, in the six weeks he was in that hospital, smiled at him. Indeed, this nurse was never known to smile at a patient or at anybody.

> "Not always smiling, but at least serene,
> When grief and anguish cloud the anxious scene;
> Each look, each movement, every word and tone,
> Should tell your patient you are all his own."

Sympathy is a wonderfully nursely virtue, and nurses must have it in full measure, but it must be poured out on patients with a good deal of discretion. They should learn to withhold it as well as bestow it. Osler says, "There are many patients who seek sympathy as a drunkard seeks his dram and as the morphia eater his morphia, and there are patients who eat out the heart of the nurse by asking for too much sympathy and by getting it when they do not deserve it."

A nurse's facial expression is one of her manners to be cared for.

> "'Tis not thy face, though that by nature's made
> An index to thy soul, though there display'd
> We see thy mind at large, and through thy skin
> Peeps out that courtesy which dwells within."

A nurse cannot always have a bright face amid sad surroundings, and particularly the sad surroundings in which she is often placed, but her face must not show what she feels. If she looks for the shadows, she will see them. The converse of this is also true. Look for the sunshine and it shall appear.

Tact is that thing which enables one to do the right thing at the right moment, and without it no one is a success in any sort of public career. Some people can go

into a hospital, into a school, into a family, and in a few days have everybody, as is said, "by the ears." Now, this is an example of the lack of tact. On the other hand, somebody else steps into the midst of a whirlpool of disorder. Perhaps her coming was most undesirable, and yet in a short time she has everybody at work and harmony reigns instead of discord. This is particularly a natural gift, but it is also to quite an extent to be cultivated, and, if anybody ever needed it to a large degree it is the nurse.

The nurse's hospital training has fitted her to carry out the practical details of nursing. She has learned to make beds, to bathe, to prepare dainty meals, to take temperatures, and to ventilate, to take care against the spread of contagious disease, to be a good housekeeper, and to keep her patient and his surroundings neat and in good order. In private practice, of course, she runs across varied conditions. Sometimes her patient will be living in the lap of luxury—has been accustomed to all the delicacies and refinements which wealth and culture can suggest. Perhaps her next case will be one in which all her ingenuity will be taxed to furnish the necessary things which go to make up the comfort of the sick room. I suppose in nursing, as in the practice of medicine and in teaching school, many of her trials will be increased more by the patient's friends and neighbors than by the individual over whose interests she has immediate charge. At the very outset the reception accorded the nurse by the family may be a source of discouragement to her, and in assuming her duties she will perhaps realize, first of all, that for hours at a time she is thrown entirely on her own resources and must meet responsibility unaided. The greatest tact will often be necessary in order to overcome whims and caprices. Her hours of sleep, which, in the hospital, have been fairly regular, are now most uncertain. Her hours of duty are long and arduous; but little rest and recreation can be obtained. She must meet with absolute hardship—bad lodging, bad food, together with faultfinding relatives. She must be ready to meet not only hardships, but other untoward conditions. There are even more subtle pitfalls which may require all she has learned in her training and all the philosophy which she is able to summon to so take care of herself that she preserve her own dignity as well as to protect the interests of the one she is employed to care for. But she should remember, as a rule, that all the difficulties do not come at once, and that oftener, for many cases in succession, none but the most pleasant experiences may be encountered.

[To be concluded in the September number.]

State Registration of Nurses.

BY HENRY M. HURD, M. D.

The recent addition of Kentucky and Mississippi to the states which previously had adopted the policy of registering trained nurses has now increased the number of such states to thirty-nine. Of these, eight have provision for compulsory registration, and the remaining thirty-one permit nurses to be registered and confer certain rights and privileges on them. The recent efforts in New York which have been ineffectual during the past two sessions of the Assembly indicate clearly that trained nurses are not content with such permissive privileges as they now enjoy, and ask for a greater degree of protection from irresponsible and unfair competition on the part of women who have not possessed at the start a proper age or educational qualification, and who have not received an adequate subsequent training either in the theory or practice of nursing. Much may be said in favor of their contention, and their situation seems in many respects similar to the conditions which existed twenty-five years ago and still exist in the practice of medicine in some regions. Fortunately, however, the well-nigh universal registration of physicians has rendered the evil a local one by reason of the difficulty of securing the right to practice beyond the limits of the benighted state which may permit a poorly equipped medical school to graduate men of faulty early education without adequate laboratory training, and without hospital experience. In the majority of these states the registration, examination, and licensing of physicians by a state board, with adequate authority to enforce its orders, has been demanded by considerations of the general welfare of the citizens of the state, and the general benefit to the public has proven the wisdom of the demand. There consequently seems every reason to anticipate that a similar action in the matter of prescribing the educational qualifications of nurses will lead to an equal benefit to the sick.

In other walks of life it is customary to throw safeguards about less important matters than the public health. Marine and stationary engineers, undertakers, barbers, chauffeurs, and electricians must show their qualifications and receive the approval of duly authorized inspectors and examiners before they are permitted to ply their vocations.

Why, then, should persons who falsely claim to have had special advantages to fit themselves for the care of every sort of disease be allowed to practice an equally dangerous calling without restrictions? The weight of argument surely is laid on those persons who oppose the examination, registration, and licensing of nurses.

There is no one who questions the fact that in states where registration has existed for some time the effect has been to improve the education, the general character, and the morale of nurses. School nurses, Red Cross nurses, visiting nurses, and army nurses are universally chosen from among those who have had proper education and an adequate training. In some states where the registration law has been weak the effect has been to raise the general standard of education. The feebler schools have been encouraged to affiliate themselves with those which possessed better facilities, and the state boards have given valuable assistance by stimulating them to increase the length and scope of the curriculum of instruction. The outlook in the United States in this respect is encouraging. Such reforms, however, make their way slowly, and a united effort ought to be made by the professions of medicine and of nursing to increase the efficiency of all existing schools.

It is evident also that the wiser heads should devise some practicable method to improve the quality of unqualified nurses, so that they may be systematically trained to become attendants on the sick. Male attendants of the grade of the usual hospital orderly and ward maids and nursery maids should be included in all such efforts to minister to the care of chronic invalids or aged persons who require skilled and patient care rather than the attendance of the highly trained nurse.

The success which has attended the effort made in England to train and supervise midwives is not without its lesson in this regard, and is worthy to be followed in the training of a minor grade of sick attendants and helpers.

The Work of a Civic Association.

BY ELIZABETH ROSS, R. N.,
Norwood Civic Association, Norwood, Mass.

What is the need that we must meet if we hope to successfully solve the problem of caring for the sick in

any community? This is the question which we must face, and in the solution of this problem will be the answers to many of the questions that are taking up so much of our space in magazines and so much of our time in our conventions—questions such as "The Grading of Nurses," "What is the Relation of the Graduate Nurse to the Attendant?" "Should the So-called Domestic Nurse be Allowed to Continue Caring for the Sick?" These and many more like them would answer themselves if those interested would unite to know and understand the *real* nursing problem. What is the most urgent need of the thousands of homes in which the wage earner or small-salaried clerk has to support his family in sickness and in health on a wage which barely meets his needs under the most favorable conditions? What percent of the bread winners earn $1,200 a year or over? How near does $1,200 a year come to supplying the minimum requirements of a family of five? We all know in a vague sort of way the answers to these questions, but do we apply our knowledge when we think and talk of how shall *we*, the *nurses*, serve the people?

The need is for a service so elastic that it will meet all demands, a service that will give value received, whether the call be for an expert surgical nurse to give all of herself and her knowledge to help a surgeon in his fight for a life, or a woman whose only task is to guide the uncertain steps of a convalescing paralytic. In each case we have a real need, but the same amount of training is not required in both cases. Why should we waste our expert on what any good, intelligent woman can do as well? Another problem is the disorganized home conditions when the homemaker falls at her task and can no longer carry on her part of the work. In many such cases rest is all that is needed; but what mother can rest when she knows that her children are running the streets uncared for and that there is no one to get a meal for her children or for her husband when he comes home? Here, again, we have a case, not for the highly trained worker, but for a housekeeper who is enough of a woman to be a mother to another woman's children until the mother herself can by rest and relief from care regain her health and courage to resume her place in the household. The cry comes to me from all sides. Where can we find such women? We *can* get them when we are able to assure them a living wage, and the only way to do this is by organized centers which control the supply and the demand.

In the business world each man takes the place for which his intelligence and training fit him, and he is recompensed according to his worth. This business method must be applied to nursing *and to nurses*. When this is done, each grade of nurse will find her level, be she graduate, attendant, or domestic nurse. There is plenty of work for every nurse who is, first of all, a true woman, and, second, a nurse, and only to such women should be given the care of the sick and unfortunate. It should be the task of the leaders of the nursing profession to work for this end.

What other profession than that of graduate nursing counts all of its members as experts—all demanding the same wage compensation, whether they be efficient or inefficient? As the result of our present system, whoever takes a nurse from a large public registry runs a risk of getting an inefficient nurse, unless they happen to be personally acquainted with one who is free to come when they need her. This is detrimental to every good nurse, as we have all had cause to know, and it cannot but affect our professional standing.

We have in our ranks able women, and to those women the world turns for help in the battle against disease and crime. To this body of women comes also the great cry for help from the great two-thirds of our American people (called the middle class), people who will not accept charity, people to whom we have no right to offer charity, people who should be given a place to which to come in times of sickness where they can find the sort of help they need at a price which they can afford to pay, and where, with the help of our hospitals and dispensaries and other institutions, we can prevent the disorganization of the homes or help to reorganize them by helping the families to help themselves.

The new St. Francis Hospital at Indianapolis was dedicated July 5. The building has a frontage of 200 feet, a depth of 48 feet, and is three stories high, with an open air pavilion extending the full length of the building between the third story and the roof. It is of a strictly modern type of construction and will accommodate 100 patients. The local press gives the sisters much praise for the success of the undertaking, which it is said has been completed in the face of difficulties.

The colony for epileptics soon to be established by the state of Iowa will consist of a group of cottages arranged in a semi-circle, with an administration building overlooking them, and a central heating station located in their rear. The cottages, which have been designed by the state architect, Mr. H. F. Liebbe, will be three-story buildings of brick and tile construction. On the main floor will be located a large sitting room, a library, dining room, and kitchen, with all provisions for kitchen service, and also quarters for the steward. The second floor will contain large dormitories and separate rooms for the attendants. Complete bath equipment will be located in the basement. Each cottage will be built to accommodate 50 patients and their caretakers. Provisions have been made for an abundance of fresh air and sunshine. Windows will be arranged so that the air coming from any direction will have a straight sweep through the rooms.

According to the Cleveland (Ohio) Press, the "Sixth City" is soon to have a new sanatorium that will be far above all others in that section. It will not be bothered by the rattle of cars and motor trucks or the dust of the street, and will not disturb the neighbors. However, there will be no running water, no fire escapes in case of a blaze, and would-be visitors will find it impossible to get into the institution. In other words, it will be an aerial sanatorium, consisting of a huge basket suspended from a mammoth balloon anchored 2,000 feet above the earth. The basket will contain compartments for patients, doctors' rooms, and nurses' quarters. This novel sanatorium is the idea of Dr. Rudolph Heym, a young physician who is devoting his life to the study and treatment of heart diseases. He will put into practice the theory that high altitude is an aid to heart affection. It is Dr. Heym's plan to send the balloon skyward every evening and bring it down every morning, allowing his patients to sleep in the high altitude.

The Illinois State Board of Health has resumed publication of a monthly bulletin of health for free distribution. Those who are interested and wish to be placed on the mailing list should apply to Dr. C. St. Clair Drake, Springfield, Ill. Dr. Drake became famous for the cartoons and witticisms and for the "pulling power" of his health talks in the bulletin of the Chicago Board of Health while he had charge of that publication. His most notable illustration, perhaps, was his great revolving wheel of babies. As the wheel revolved, obstructions along the course, representing various infant diseases, knocked over a certain proportion of the little figures; at the conclusion of the revolution not many babies were left standing, and the dead ones along the route showed the percentage of deaths from each disease, and those left standing represented the percentage that survived. It was a great mechanical demonstration at various "infant welfare" exhibits, and has done a lot of good. It is hoped that Dr. Drake's new office will give him even a broader opportunity for his unique health publicity.

QUERIES and ANSWERS

Safety of Automatic Elevators.

To the Editor of THE MODERN HOSPITAL:

We are to build, and are thinking about automatic elevators, as our institution is a small one. Some one has said that these elevators are not safe. We want to know whether they are safe, and whether we will lose or save by installing them rather than the man-operating machines. SUPERINTENDENT, Ohio.

The automatic elevators, as built and installed at the present time, are practically as safe as those run by a regular elevator operator. They cost more to install, but they save not only the wages and board of operators, but they save an immense amount of worry, because elevator operators are hard people to handle, especially such as small hospitals can afford to pay. Don't forget that it takes about three people to run one elevator for twenty-four hours, and your automatic mechanism is always sober, although Miss Rogers, of St. Luke's Hospital, St. Louis, has been running her elevators with young women for some time, and would not think of going back to men again. Put in your automatics and cut down your pay roll.

How to Do Laundry Work.

To the Editor of THE MODERN HOSPITAL:

What should be the cost of operating the laundry in a 50-bed hospital, and will it be cheaper to maintain our own laundry or have our work done in a commercial laundry? W. T. N., Pennsylvania.

Whether it will be cheaper to do your own work or have it done outside will depend on conditions in your institution. Leaving out the question of cost, it will be better to do your own work, because you will have better control, will be able to guarantee disinfection, and will save your fabrics by proper methods of washing. Commercial laundries are very hard on fabrics because they use too much bleach, which whitens the goods at a low labor cost, but wears them out quickly.

As to costs, a most liberal allowance of laundry is twenty pieces per bed of the hospital. This means table linen, help's and nurses' laundry, and everything in the house. That figures out 1,000 pieces per day. A commercial laundry should do the work, including nurses' and interns' waists, shirts, and collars, for $1 per 100 pieces, or $3,600 per year.

In figuring on having the work done at home, you had better include every expense—water; high and low-pressure steam, the one for heating the mangles and the other for heating the water; electric power; gas for body and hand irons; soap, starch, bluing, bleach; wages for labor; food and lodging for laborers, if you board and lodge them; upkeep—that is, purchase or renewal of worn-out parts, and repairs and alterations, which will run about $300 per year, unless your own engineer can do most of the work; interest on the investment; and depreciation on plant, amounting to about 10 percent per annum.

If you are a good manager, you should be able to do your own work as cheaply as a commercial plant would do it for you, and take out its own profit; and your work should be better done, from a hospital standpoint, and your fabrics should last far longer.

Contract Buying for Hospitals.

To the Editor of THE MODERN HOSPITAL:

I have been buying for our hospital as my own judgment dictated—sometimes in quantity and sometimes on contract when I thought I could save something. Some members of the board think we should buy altogether on contract, and they point to the municipal hospitals, and their low per capita costs to illustrate their point. All of us would like to know what THE MODERN HOSPITAL thinks about this. A WOMAN SUPERINTENDENT.

Better suggest to your board members that the reason why supplies for municipal and state hospitals are bought on contract is because the laws relating to the expenditure of public moneys are predicated on the assumption that everyone is a grafter—and this assumption is correct often enough to justify the system; but contract buying does not account for low per capita costs in these hospitals. The facts are that appropriations for these institutions are made by legislators who are in touch only with the money, and not with the sick poor whom their appropriations are intended to benefit; therefore they generally appropriate for about everything else, and the miserable remainder can be used for the sick poor; then the superintendents, or the powers over them, must cut the garment according to the cloth, rather than to fit the man who is to wear it. But it is to be noted that the well people in these political hospitals, who are usually somebody's henchmen, fare pretty well, and that the low per capita costs are at the expense of the patients only—15 cents per day for raw food for patients and 40 cents for well people is about the average.

There is nothing in contract buying as a hard and fast system. On many commodities money can be saved by buying in quantities when the goods are not perishable, like gauze or dishes; or on a contract for periodic delivery on perishables, such as potatoes, or eggs, or milk, if one can keep a perfect check on quality; but as a rule contractors of produce will get even with you for a low price by giving you an inferior article unless you are in a position to watch for stale eggs, specked potatoes, and low butter-fat, high-bacterial-count milk, etc.

In thirty years of hospital life I have known of only one hospital superintendent who was accused of grafting in the purchase of supplies. If your board does not trust you to buy honestly and wisely, you had better find out why. If it does trust you, go on buying as you are doing, taking every advantage of the markets and of the financial and physical conditions in your institution to pay for and take proper care of your purchases.

JOHN A. HORNSBY.

The success achieved against the plague and disease will be an incentive to general sanitation work in Mexico. The work of General Wood in his campaign in Havana and the disinfection work of the Canal Zone are counted among the wonders of the world. The Government's work along these lines has been so successful that in the month of February last no death from disease occurred among 9,000 white citizens of the Zone.

The endowment of the Rockefeller Institute for Medical Research was increased $2,550,000 July 1 through the gift of that amount from John D. Rockefeller. The sum mentioned is in addition to $1,000,000 given by Mr. Rockefeller a short time ago for the establishment of a department of animal pathology. Mr. Rockefeller's previous gifts to the institution have amounted to $9,000,000, making the total endowment more than $12,500,000, which is larger than that of any other similar institution in the world.

HINTS FOR HOSPITAL SUPERINTENDENTS.

The rapid evolution of the motorcycle into the cycle car or semi-automobile offers some interesting possibilities in the way of ambulance service to the small hospital that cannot afford the initial outlay and upkeep of a large motor ambulance, and also for large hospitals as an additional unit for special service or when the other is in use. While there is nothing in the shape of an "ambucyclance" on the regular market at present, it only waits for the idea to germinate with some enterprising manufacturer, and a well-designed type could be brought out at a cost of around $350 which would possess traffic advantages in speed and in ability to thread through congestion and run on roads ordinarily impassable for present conveyances.

Call on the medical men connected with the hospital whenever you can find an excuse to do so, and encourage them to formulate rules for their various services. Use your influence to have these rules adjusted as you want them. Doctors will usually give you about what you want, except when there is some special case at issue; but if you have already had them pass rules that have been approved by your board, covering just such a case, it is an easy matter to control them. Doctors will usually help you in every way, except when their personal interests are involved in some individual case, and they then will take the roof off trying to have their own way. If you have your rules, you will have no trouble.

Floral window boxes go a long way toward relieving the monotony of brick and stone. This form of ornamentation has been in use in Europe for a long time past, and accounts in a good measure for the outward charm of some of the old world institutions for the sick. Window garden need not be exclusively a summer feature, as many of the summer plants may be replaced with evergreen, Norway moss, or arbor vitæ on the approach of winter. Wooden boxes should not be used on account of their tendency to warp and leak, but metal boxes of galvanized painted sheet iron, which cost but little more, should be employed, or copper is still better if it is scoured once a week. In some cases it will be found easy to match the building with ready-made terra-cotta or concrete boxes. On an average four-foot coping the cost per window, including plants, should not run over $3.50.

Why not think about putting your housemen and maids in uniform? Denim or khaki costs very little, and it will mean a great improvement over the slovenly, dirty, heterogeneous odds and ends of clothing commonly worn by the people. If there is any place in the world where order and discipline and neatness should prevail, it is a hospital; and it is not enough to recognize and have these things, but there should be outward manifestation of their presence. Overalls and jumpers for the men will cost little, and full aprons, to the shoe tops, with long or half sleeves, for the women. They can be made in the linen rooms or bought ready made. They will save enough wear of the people's own clothing to justify their paying the small price out of their wages, if that is financially necessary.

It is not sufficient to compel everyone who works on the wards of the hospital to wear rubber heels, but especially in the case of the nurse it should be insisted that good rubber heels be bought, so that they will not wear out quickly, and it is essential that these should be renewed whenever they are worn out to such an extent that the wearer's foot is turned over in walking. The heels of women are very small, as a rule, and it does not take long for a small surface of even good rubber to wear away. A nurse walking on the side of her foot will tire in about half the time she would if she set both feet squarely on the ground, and hence care and watchfulness about the nurse's rubber heels may easily become a very large factor in administrative economy in the course of the year. We often hear it said that a nurse will tire on her feet when at work, but can change her shoes and dance half the night—because she wears new or little worn shoes to dance in. Make them buy good heels, and make them renew them when necessary.

There are as many different ways of washing blankets as there are cures for rheumatism, and with about as good results in most cases. The following is the manner in which the Pullman Company washes some 20,000 wool blankets a year: In a vat or large tub have the water steaming hot, and to each pair of blankets to be immersed add one-half bar of pure white soap, two tablespoonfuls borax and one tablespoonful naphtha; before using the naphtha see that all open flame is extinguished in the wash room; when the water is cool enough to bear the hands, put in the blankets, let them soak, accompanied by a gentle rising and falling for twenty minutes, with enough hot water added to keep the temperature up. Do not rub or let the bar soap touch blankets; for soiled edges use a nail brush without additional soap; do not wring, but fold compactly and squeeze; place in another suds and repeat foregoing, then rinse twice in clear tepid water; if possible, lay flat on an elevated screen to dry, and, when partly dry, beat lightly and evenly with a rattan. Sunlight is good on the lighter shades, providing the rays strike the blanket evenly.

A good watch should be a personal possession throughout the hospital. There are too many of the "clock type" or $2 watches carried. Though some of these keep unusually good time while they last, their life is short and they are apt to mislead at a moment when correct time is most important. The argument for their use is that most pupil nurses cannot afford the outlay for a more expensive watch, which argument is best answered by the fact that most reputable jewelers throughout the country are willing to sell a first-class timepiece to as safe a credit risk as a local hospital attache on terms of payment adaptable to the purchaser's monthly income.

A good 6-size 15-jeweled standard make movement in a 20-year gold open-face case can be bought for twelve to fourteen dollars, and if cleaned and oiled at intervals not longer than fourteen months, will have a life of twenty years or more, and is capable of being regulated to a monthly rating within ten seconds. A 6-size watch is approximately the diameter of a 50-cent piece, and is the proper size for a woman engaged in occupational work. Smaller than this size is at a sacrifice of timing and abuse-resisting qualities. There are three or four makes of Swiss watches on the market in this country adapted for nurses, by having sweep-second or split-second hands, but Swiss watches lack the sturdy qualities of American makes and are not a good investment. Always use a neck or belt chain or a brooch fastening on a watch. If the use of unsecured fobs were to cease, the watch repair business would drop off one-third.

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NEWS *of the* HOSPITALS *and* SANATORIUMS

The new St. Joseph's Infirmary at Paris, Tex., was formally opened July 2.

The new $100,000 Huber Memorial Hospital at Pana, Ill., has been opened to the public.

A new wing costing $87,000 is to be added to Mercy Hospital, Davenport, Iowa, in the near future.

A $50,000 building for negro patients is being erected at the Texas State Hospital for the Insane at Austin.

The Kelley Island Lime and Transport Company at Marblehead, Ohio, is erecting a hospital for its employees.

Work has been begun on the first of two new buildings to be erected for the Texas State Epileptic Colony at Abilene.

A campaign is being conducted at Miles City, Mont., to raise $20,000 for an addition to the Sisters' Hospital at that place.

A county tuberculosis sanatorium is being erected by Goodhue County, Minn., on Lake Byllsby, near the town of Cannon Falls.

Contract has been let for a new building for the Minnesota State Hospital for Crippled and Deformed Children at St. Paul.

The third field hospital of the Ohio National Guard was mustered in at Youngstown on June 30. Major W. P. Love will be in charge.

A new hospital of the Missouri and North Arkansas Railroad is to be located at Heber Springs, Ark. A $30,000 building will be erected.

Plans have been completed for a three-story and basement reinforced concrete hospital to be erected by the Union Iron Works at San Francisco.

Vassar Brothers' Hospital at Poughkeepsie, N. Y., is to be enlarged and its working facilities increased by the building of an addition to cost $40,000.

The Homewood Sanatorium at Warren, Pa., which was destroyed by fire early in the summer, is being replaced by a larger and better equipped building.

The cornerstone of the new Sacred Heart Hospital to be erected at Yankton, S. D., at a cost of $250,000, was laid with ceremonies the last week in June.

Augustus Beyer, a well-known resident of Ypsilanti, Mich., who died in Washington a short time ago, left $50,000 to the city of Ypsilanti to found a hospital.

Miss Elizabeth McGregor, a graduate of the University of Minnesota, has been appointed superintendent of the State Hospital for Crippled Children at St. Paul.

Harper Hospital at Detroit, Mich., has under consideration additions and improvements which would give the institution 750 beds. The present capacity is 400.

It is announced that the construction of the hospital for contagious diseases provided for in bonds issued by the city of Scranton, Pa., last fall will be begun soon.

Dr. Kilbourne, superintendent of the State Hospital for the Insane at Rochester, Minn., recently celebrated his twenty-fifth anniversary as head of that institution.

The Douglas County (Wis.) Tuberculosis Hospital at Superior will hereafter be used exclusively for insane patients afflicted with the white plague, all others having been transferred to the sanatorium at Eau Claire and

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Amebic Dysentery. Up to the present time reports covering 119 cases of Amebic Dysentery treated with Emetine have been published, with 108 cures. The remaining 11 cases were in very advanced stages, the results representing practically 100 percent of cures among the curable cases.

Friedenwald and Rosenthal* state that:

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Amebic Pyorrhea and the Emetine Hydrochloride Treatment. According to the researches of Allen J. Smith and M. C. Barrett,† pyorrhea alveolaris may be due to amebic infection, and in these cases beneficial results are frequently secured by the use of Emetine Hydrochloride.

Emetine Treatment of Hemoptysis. Flandin and other authorities claim that one of the properties of Emetine is to constrict the small blood vessels, and that it has given good results in the treatment of hemoptysis. The usual dose is 0.04 gram Emetine Hydrochloride subcutaneously. He states that "the result of the injection was surprising, the hemorrhage from the lung stopping immediately. No disagreeable sensation was experienced, no palpitations, dizziness, or nausea."

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*New York Medical Journal, July 4, 1914.
†A preliminary report read before the meeting of the Pennsylvania Dental Association, June 30, 1914.

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Manitowoc. The state will pay $3.50 a week for the care of each insane patient sent to the county hospital. This movement is a part of a general scheme of the state to isolate insane patients suffering from tuberculosis.

Miss K. L. B. Tully, for the last five years superintendent of the North Hudson Hospital at Weehawken, N. J., has resigned and Dr. A. G. Bising has been appointed to succeed her.

The Norwich (Conn.) State Hospital has been granted an appropriation of $2,500 for the sinking of artesian wells, which will make the institution independent as to water supply.

The German Lutherans of York, Fillmore, Polk, and Seward counties, Nebraska, have started subscriptions toward the establishment of a thoroughly modern hospital in the city of York.

The Howard Hospital, of Philadelphia, has outgrown its present quarters and is planning the erection of a $200,000 addition. The new building will be a six-story fire-proof structure.

The Foresters of America have leased the Burke Sanatorium at Santa Rosa, Cal., with option of purchase, and will operate it as a hospital and old people's home for members of the order.

Dr. E. R. Marshall, who has been serving as assistant surgeon at the quarantine station at Honolulu, became superintendent of the United States Marine Hospital at Providence, R. I., July 1.

Plans are being prepared for the new home for St. Joseph's Hospital at Kansas City, Mo. The building is to be erected at Linwood boulevard and Prospect avenue, and will cost about $500,000.

Dr. A. C. Watts, who conducts a private sanatorium for tubercular patients at Fulton Springs, near Lewisburg, Ala., is erecting a building to take the place of one destroyed by fire in April.

An additional hospital for the insane is to be erected by the state of California at Norfolk in the southern part of the state. It will be built on the cottage plan and will accommodate 2,000 patients.

New quarters for the nurses, additional rooms for patients, sun parlors, and other needed facilities are to be provided for the Woman's Hospital, Nashville, Tenn., in an addition to be erected soon.

A new building is being planned for the Jewish Hospital at St. Louis. The proposed structure, it is said, will be twice the size of the one now in use, and will cost, the site included, approximately $500,000.

Miss Charlotte Hazen, superintendent of the Stewart Hospital at Hutchinson, Kan., resigned July 1 and returned to her home in Ohio. Miss Gardner, a local nurse, was appointed to fill the vacancy temporarily.

A private sanatorium has recently been opened at St. Louis by Mrs. Thomas J. Akins. The institution is located on a seven-acre tract of land on McLaran avenue, four blocks from the northwestern city limits.

The new private tuberculosis hospital at Salem, Va., known as Mt. Regis Sanatorium, is now in operation. Dr. Everett Watson, of Roanoke, is the physician in charge, and Miss Elizabeth Zacharias, the chief nurse.

With shrubs and blooming plants about them, the patients at the Good Samaritan Hospital, Portland, Oregon, will soon begin to spend pleasant days on the roof of the building, where a garden is being constructed.

There is a new superintendent at the Suburban General Hospital in Bellevue, Pa. She is Miss Ida M. Gailey, for the last two years director of nurses in charge of the training school of Montefiore Hospital in Pittsburgh.

The dairy barn of the State Hospital for the Insane at Columbia, S. C., was struck by lightning recently and destroyed, together with its contents, including several thousand dollars' worth of implements, feed, etc.

Dr. J. W. Babcock, formerly superintendent of the State Hospital for the Insane at Columbia, S. C., and Dr. Eleanora B. Saunders, who was his assistant, are erecting a sanatorium building at Pinehurst, a suburb of Columbia, to accommodate 100 patients. Since severing their con-

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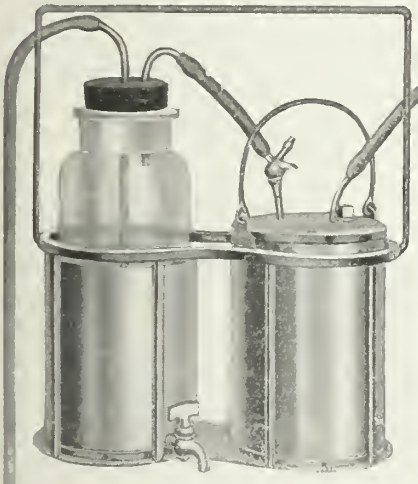

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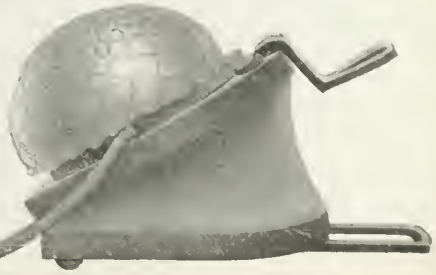

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nection with the state institution several months ago, Drs. Babcock and Saunders have been conducting a private sanatorium in temporary quarters in Columbia.

The Harlow Hospital at St. Peter, Minn., has passed into the hands of Dr. B. F. Bliss and Dr. Geo. A. Nothhelfer, of St. Paul. The institution will hereafter be known as the Health Haven Sanatorium and Hospital.

The Knickerbocker Hospital, Amsterdam avenue and One Hundred and Thirty-first street, New York, is to have a costly new home opposite the Convent of the Sacred Heart.

The Oncologic Hospital, Powelton avenue and Thirty-third street, Philadelphia, is planning a three-story brick addition, 35x60 feet, which will be used for advanced cancer cases.

At Fremont, Ohio, Mrs. Webb C. Hayes has offered to contribute $100,000 to endow a hospital as a memorial to her mother, Mrs. Nancy Otis Miller, provided the sum of $3,000 a year is guaranteed toward its maintenance.

Plans are being considered for the erection of an addition to the Santa Fe Hospital at Temple, Tex. It is reported that the new wing will cost $100,000, and that the construction work will probably begin early in the fall.

Work has been begun on an addition to the American Oncologic Hospital at Thirty-third street and Powelton avenue, Philadelphia. The hospital has outgrown its present quarters, and for some time has had a waiting list.

A gift of $10,000 from a man who has requested that his name shall not be made public has recently been made to the Plattdeutsche Volks Verein, of Brooklyn, N. Y., toward the building of a home for aged North Germans.

Patients in South Dakota's charitable and penal institutions now enjoy the "movies," machines having been recently installed. It is the intention of the authorities to select films that will be educational as well as entertaining.

Former Mayor Nathan Barnert, of Paterson, N. J., has deeded to the Nathan and Miriam Barnert Memorial Hospital Association a block of ground to be used as a site for a new hospital. He has also contributed $150,000 in cash.

It is expected that the new South Baltimore Eye, Ear, and Throat Hospital will be completed in time to transfer the patients from the old building October 1. The institution is badly hampered in its old quarters for lack of room.

A number of the most prominent citizens of Dell Rapids, S. D., are taking an active part in a movement to raise funds to build and equip a public hospital. Already a considerable sum has been subscribed and success seems assured.

The new building to be erected in Tacoma, Wash., this summer for St. Joseph's Hospital of that city will have accommodations for 300 patients. The ground floor dimensions are 250x150 feet and the structure will be five stories high.

Improvements to cost $750,000 are to be made at Iola Sanatorium, Monroe county's tuberculosis hospital, near Rochester, N. Y., this summer. They will include a three-story main building, a kitchen, dining room, and surgical laboratory.

Miss Gladys Bohn, a graduate of the Chicago Post-Graduate Hospital, and formerly connected with the Mary Crane Memorial, of Chicago, entered on her duties as superintendent of the Platon Hospital at Valley City, N. D., July 1.

Governor Cruce, of Oklahoma, recently appointed members of the State Board of Nurse Examiners as follows: Miss Luella Saliday, Tulsa, successor to Miss Young; Miss Mabel Garrison and Miss Lucy Maguire, both of Oklahoma City.

It now seems certain that a joint city and county hospital costing $250,000 will be erected at San Antonio, Tex. The need of additional hospital facilities at San Antonio has been felt for some time, and both the city and county have had hospital projects under consideration. The final conclusion was that by combining their funds a better equipped institution would be assured, and that it would cost less to conduct one hospital large enough to meet all

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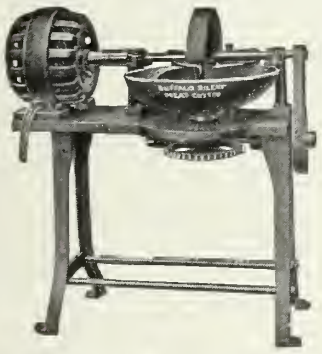

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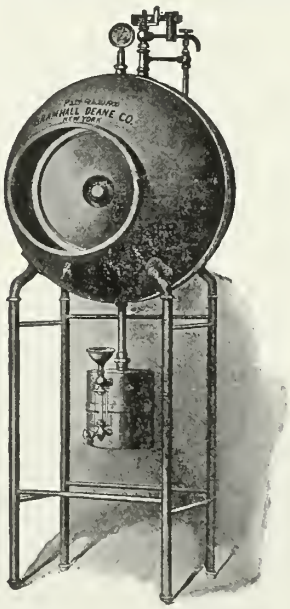

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the needs of both city and county than to operate two smaller ones. It is probable that a nonpartisan and nonpolitical board of governors will have charge of the hospital.

A model of the new Cincinnati General Hospital will be exhibited at the San Francisco Exposition next year. It is the work of William J. Shultz, who will show reproductions of more than five hundred Cincinnati buildings at the Exposition.

The Rev. J. Goldstern, for the last several years superintendent of the Evangelical Deaconess Hospital at Milwaukee, has severed his connection with the hospital to resume church work. The Rev. S. W. Krieger is the new superintendent.

Work has been begun on the nurses home to be erected at a cost of $45,000 for the German Hospital at Stockholm street and St. Nicholas avenue, New York. The building will be three stories high and will accommodate forty-six nurses.

Dr. George P. Pipkin, who succeeds Dr. R. E. Castelaw as head of the Kansas City (Mo.) General Hospital, assumed charge of the institution July 15. Dr. Pipkin was promoted from the superintendency of the city hospital for contagious diseases.

In its fifty years of existence the Boston City Hospital has treated 1,862,359 patients. Its bed capacity at the beginning was 240, and is now 1,000. Three hundred nurses are employed. The average daily cost of maintenance per patient is $1.81.

An apartment building in Rochelle, Ill., is being converted into a hospital, which after August 1 will be in charge of Dr. A. W. Chandler, who has conducted a hospital at Compton, Ill., for some time. Dr. Chandler has been in Europe most of the summer.

Contract has been let for an addition to the Contra Costa County Hospital at Martinez, Cal., which, it is stated, will make the institution one of the most modern and complete of its kind in the West. The first unit of the building was erected two years ago.

Miss Eva A. Parsons has resigned her position as superintendent of the University of Iowa Homeopathic Hospital Training School for Nurses at Iowa City. She will go to New York City in the fall and take a course in the Teachers' College of Columbia University.

Hahnemann Hospital, Kansas City, Mo., will hereafter be known as Grace Hospital. The last two years homeopathic treatment has been employed generally at this institution, but from now on all members of the medical profession in good standing may practice there.

James U. Norris, for the last eight years superintendent and assistant manager of the Rockefeller Institute for Medical Research in New York, has been appointed superintendent of the New York Polyclinic Medical School and Hospital, to succeed John Gunn, resigned.

An addition to the Hattiesburg (Miss.) Hospital, which will increase its capacity 50 percent, has just been completed. The new wing was built under the direction of Miss Jennie M. Quinn, the superintendent, and is said to be modeled after the best types of hospital buildings.

Overlook hospital at Summit, N. J., has become a public institution, $125,000 having been raised for its purchase in a twelve-day campaign. The founder and former owner, Dr. William H. Lawrence, Jr., will remain in charge of the hospital and serve as its chief surgeon.

Aurora, Ill., will soon begin the erection of a new city hospital. The building will be four stories high and is planned to accommodate 65 patients. A solarium designed for use in winter as well as summer will cover the entire roof. It is estimated that the building will cost approximately $100,000.

Bainbridge, Ga., is to have a public hospital of 24 beds, to cost approximately $20,000. The funds will be provided by a bond issue. Dr. J. D. Chason has long been working for the institution, and it is said to be largely through his efforts that the erection of a building has been made possible.

Miss Sarah L. Clayton, of Chicago, has been appointed chief nurse at the Philadelphia General Hospital, succeed-

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ing Miss Nellie May Rennyson, who resigned June 1. There are one hundred nurses in this hospital. Miss Clayton is not a stranger to the institution, having graduated from it in 1894.

Dr. Len Chee, of Peking, China, a member of China's national board of health, has been inspecting hospitals in the United States this summer with a view to getting ideas for a $750,000 hospital to be erected in Canton next year. Dr. Chee was at one time a student in Jefferson Medical College, Philadelphia.

Committees have been appointed by the Swedish National Association of Rock Island and Moline, Ill., to solicit and collect necessary funds for the erection of a $100,000 hospital in Moline. A considerable part of the sum has already been promised, and it is expected that the rest can be raised within a short time.

The new officers of the North Carolina Nurses' Association are as follows: president, Miss Cleone Hobbs, Greensboro; first vice-president, Miss Mary L. Wyche, Greensboro; second vice-president, Miss Julia Stimpson, Raleigh; treasurer, Miss Hattie Lowery, Wilmington; secretary, Miss E. May Williams, Wilmington.

Mrs. B. L. Harris, formerly head of the training school for nurses at Harper Hospital in Detroit, has been chosen superintendent of the Children's Free Hospital of that city, to succeed Miss Alice Stenholm, resigned. Miss Stenholm has accepted a position in the training school of one of the hospitals in Tacoma, Wash.

Henry Ford, automobile manufacturer, of Detroit, Mich., who recently took over the Detroit General Hospital, under construction, with a view of completing it at a cost of a million dollars, has announced that one of his ambitions is to make the institution one of the greatest in the world for the study and treatment of cancer.

It is reported that an additional hospital is soon to be established at Tampa, Fla. According to information, a syndicate of local men is backing the enterprise, and Drs. Helms, Bitzer, and Vinson will be actively connected with the institution, which will be known as the Seminole Hospital. Plans for the building are being considered.

At a recent election of the Washington State Graduate Nurses' Association officers were elected as follows: Mrs. Edna L. Robinson, Seattle, president; Miss Alice M. Claude, Spokane, vice-president; Miss Katherine Major, Seattle, secretary; Miss Belle Frazier, Seattle, assistant secretary; Mrs. Etta B. Cummings, Tacoma, treasurer.

The 1,500 patients of the California State Hospital for the Insane, near Oakland, were treated to an elaborate observance of Independence Day. Following a dinner, there was a grand march and dance, with music furnished by a brass band. After the dance a motion picture show was given. Two baseball games were played during the day.

It is reported that every nurse employed in the radium hospital to be established in Milwaukee by Dr. Oscar Strauss and others will be required to furnish a $100,000 bond. In addition to their work as nurses, the women will serve as guards for the radium belonging to the institution, which it is said will constitute one-eighth of the world's supply.

The New York State Hospital commissioners have recently been inspecting sites offered for the new state hospital for the insane to be established in the near future. The new institution is intended to relieve the hospital at Central Islip, which is becoming overcrowded. It will probably be erected on Long Island and will house about 2,000 patients.

A modern nurses' home is being erected for the City Hospital of Youngstown, Ohio. The building will cost about $70,000. It is the gift of Mrs. F. D. Wilkerson, Henry H. Stambaugh, John Stambaugh, and George Stambaugh in memory of their parents, the late John and Caroline Stambaugh, who donated the ground for the first hospital in the city.

The hospital administrators of Kansas City recently met and organized the Hospital Improvement Association of Kansas City. The following are charter members: Dr. R. E. Castelaw, General Hospital; Mr. Fred L. Woodell, German Hospital; Mr. A. C. Stowell, St. Luke's Hospital; Dr. J. Archie Robertson, Wesley Hospital; Dr. S. C. Fox,

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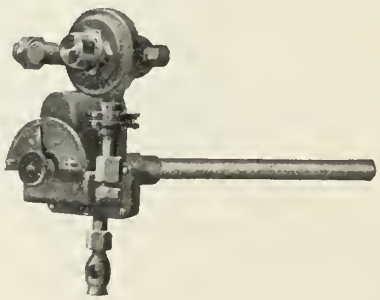

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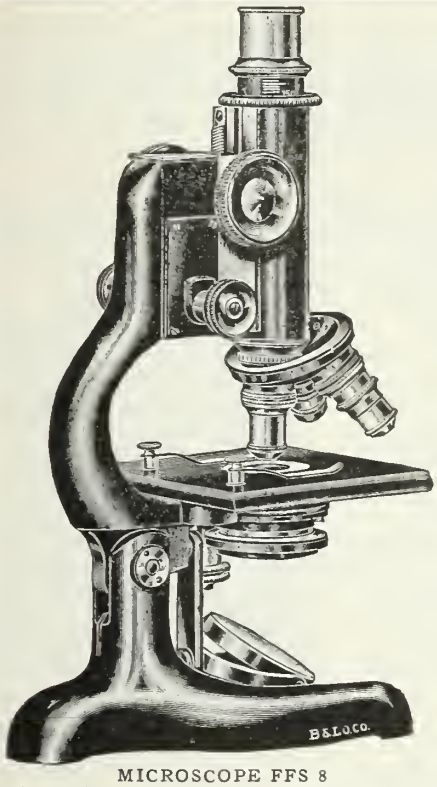

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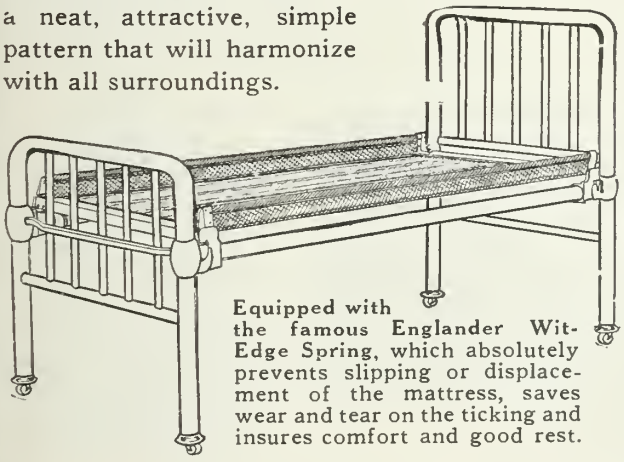

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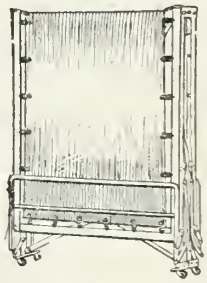

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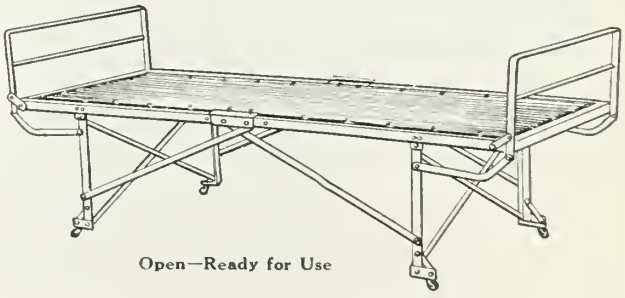

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Dr. Joseph S. Doane, formerly assistant resident physician at the Shamokin (Pa.) State Hospital, has been appointed chief resident physician at the Philadelphia General Hospital. He succeeds Dr. Henry Sykes, deceased. Dr. Doane is a graduate of the Medico-Chirurgical College and served as chief resident physician at the Episcopal Hospital, Philadelphia.

The Sisters of Mercy are planning the erection of a handsome new home for Mercy General Hospital at Charlotte, N. C. The building will consist of three stories and basement, and will be of the English Gothic style of architecture. It is estimated that the cost will be about $50,000. The interior arrangement and furnishings are to provide the most modern facilities.

Cleveland, Ohio, has a hospital that can be taken down, folded up, carried here and there, and erected at will in a few moments. It is the new open-air portable hospital belonging to the Babies' Dispensary at 2500 East Thirty-fifth street. The structure is 30 feet long and 14 feet wide, and provides room for 20 beds. It is entirely inclosed with screens.

In addition to a donation of $100,000 to build the Abingdon (Pa.) Memorial Hospital, which was opened recently, George W. Elkins, Sr., of Philadelphia and Elkins Park, has contributed $250,000 toward an endowment. It is thought that other wealthy men will raise the endowment fund to $500,000. Miss Ida M. Southard is the superintendent of the new institution.

An emergency hospital is being maintained by the Missouri Pacific-Iron Mountain Railway system in connection with its general offices in St. Louis during the hot season. The new department is supplied with cots, and all the medicines and equipment used in treatment of sunstroke and other forms of illness caused by hot weather. There are several thousand employees in the offices.

The new city hospital at Newark, Ohio, is nearing completion. It is a handsome three-story and basement structure, said to contain all the desirable architectural features. There are nearly a hundred rooms in the building, including six sun parlors. In addition to the usual elevator service, two stairways connect all of the floors. The hospital is surrounded by trees and beautiful grounds.

In a recent report on the Eastern Washington Hospital for the Insane at Medical Lake, J. J. Higgins, in charge of the pure food division of the state department of agriculture, spoke very highly of the cleanliness and general sanitary conditions of the food service at the institution, giving much praise to the management for the extraordinary care shown to have been exercised in this respect.

Nursing is to be added to the domestic science course of the Cincinnati high schools. Arrangements have been made with the Cincinnati General Hospital whereby the junior and senior girls will be accepted as cooperative pupil nurses. In addition to learning how to attend and care for the sick, they will be given special instruction in the hospital kitchen on the preparation of food for patients.

According to figures compiled by the Child Federation of Philadelphia more than 1,500 babies died in that city last summer because their parents were too poor to obtain medical advice. To prevent a repetition of this record, a "health center" has been opened by the Federation at Twelfth and Carpenter streets, where free treatment will be given to the children of the poor by physicians and nurses.

Haverhill, Mass., is to have a new $50,000 hospital. The site, occupied by a building formerly used as a children's home, was a gift to the city from General Stephen H. Gale. The old building will be remodeled to adapt it to hospital requirements, and in addition two separate wards, a kitchen building, and a nurses' home will be built, these being connected with the main building by covered corridors.

A home for tubercular children has been opened in Almogordo, N. M., by the Children's National Tuberculosis Society. This is the first of a number of such homes this organization plans to establish in different parts of the country as rapidly as its financial growth will permit.

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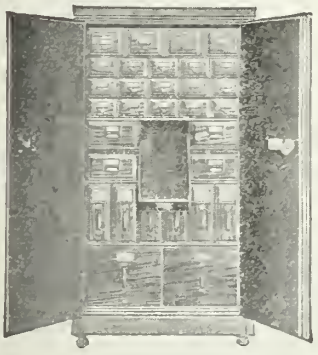
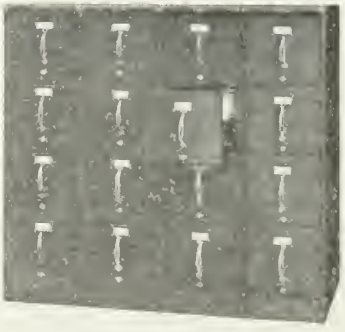
(Signed) WM. E. DAWSON,
Business Manager.





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In connection with the Almogordo home it is announced that children whose parents are not able to pay for treatment will be received in preference to pay patients, but that it shall be the plan to keep the institution filled. The headquarters of the society are in Chicago.

The Watts Hospital at Durham, N. C., is issuing periodically a bulletin, the purpose of which is to enable the staff of the hospital to collect and publish facts of scientific and educational value established in the course of their work. The publication will be distributed free to members of the North Carolina Medical Society, the expense being borne by Geo. W. Watts, the founder of the hospital.

According to a local newspaper, friends of a patient in the Kansas City General Hospital took unusual pains to see that his stay in the institution be made as pleasant as possible. A physician inspecting the ward in which the patient was confined found a large jar of strawberry preserves, half a pint of whisky, two large plugs of chewing tobacco, a package of cigarettes, and several bags of smoking tobacco.

An election of officers held by the Montana Graduate and Registered Nurses' Association recently resulted as follows: Mrs. Mary Boyle, Butte, president; Mrs. Agnes Kelly, Livingston, vice-president; Sister Mary Corona, Butte, second vice-president; Mrs. Paul Remington, Missoula, secretary, and Mrs. Mary Plat, Helena, treasurer. Miss Augusta Ariss, of Great Falls, was elected counselor to fill a vacancy.

The Santa Fe Railway Employees' Hospital Association is considering plans for the erection of a new wing to the general hospital building of the association at Temple, Tex. It is estimated the addition will cost $100,000. The hospital serves the employees of the entire gulf system of the road, and is said to be a model institution of its kind. Drs. A. C. Scott and R. R. White, of Temple, are the chief surgeons.

Through the philanthropic offer of a citizen, Mr. E. C. Benedict, to finance the project, the city of Greenwich, Conn., is to have a new hospital building to cost $250,000. It is the purpose to combine in the new structure, with greater facilities, the work of the two hospitals now in Greenwich—the Greenwich General Hospital and the Witherell Memorial Tuberculosis Pavilion—although both of the structures now in use will be retained.

The charter of the proposed general hospital for Floyd County, Georgia, to be established at Rome, is said to be unique in that it treats the governing board and advisory board of the hospital as public servants, and provides for electors, consisting of the judge of the Supreme Court, the foreman of the grand jury, chairman of the board of county commissioners, and mayor of the city of Rome, who are annually to elect directors and others.

A meeting of prominent Japanese was held in Tokyo July 1 for the purpose of organizing a Japanese council for the extension of St. Luke's American Episcopal Hospital, under the direction of Dr. R. B. Teusler, into a modern international hospital. An American council for this purpose was formed in New York some time ago. It is intended to make the hospital a practical monument of international friendship and cooperation in medical science.

The Graduate Nurses of Alabama have organized a state association. Miss Linna Denny, head nurse for the Birmingham public schools, is the president of the association; Miss Margaret Hutton, of Montgomery, vice-president; Miss Lemoine Phares, of Mobile, second vice-president; Miss Helen MacLean, head nurse of the Tally Infirmary, Birmingham, recording secretary; and Miss Mary Denman, of Birmingham, corresponding secretary.

The Helen C. Juilliard, floating hospital of St. John's Guild, New York, entered her eighteenth year of service to the sick babies of the poor on July 6. In addition to the cool salt water breezes, the benefits of this floating hospital include the care of doctors and nurses, the feeding of infants with food prepared on board and issued as required, milk furnished twice daily for other children, a warm dinner served at midday, medicated and salt water baths for the babies, salt water shower baths for the mothers and older children, and instruction to mothers in the care of their children. The boat has a capacity of 1,200.

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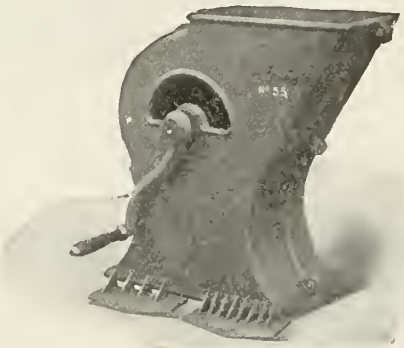

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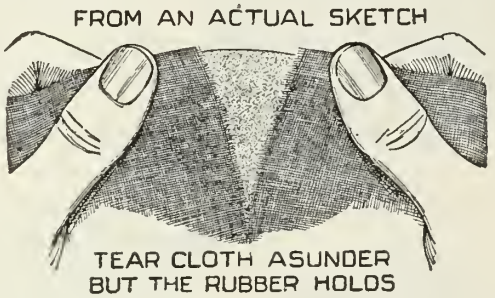

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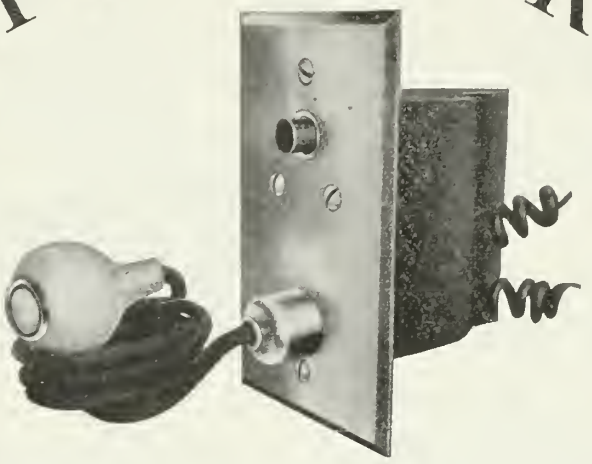

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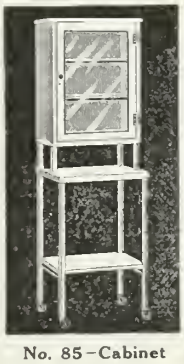

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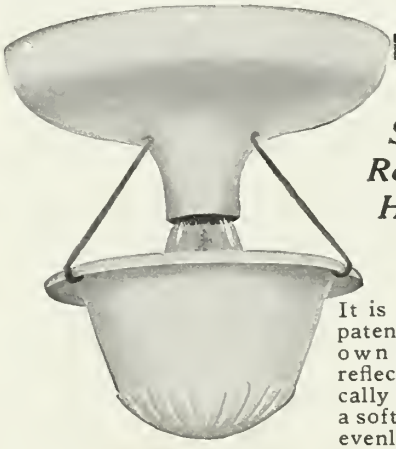

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POSITION—As superintendent of a hospital; I am now directing a Chicago hospital; entirely satisfactory recommendations. Address E. T., THE MODERN HOSPITAL, 1502 Tower Building, Chicago.

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POSITION—Registered nurse, at present supervisor of operating rooms in large general hospital, desires position as superintendent, assistant superintendent, or supervisor of nurses; excellent references. Address F. R. J., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—As superintendent; experienced hospital administrator, nonmedical, wishes position as superintendent, preferably on the Pacific coast; is now head of 250-bed hospital; personal reasons for change. Address J. C., THE MODERN HOSPITAL, 1502 Tower Building, Chicago.

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POSITION—By graduate R. N., executive position in hospital or institution; superior education, fine hospital experience, good teacher and disciplinarian; understands bookkeeping; highest references. Address L. A. H., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

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POSITION—As superintendent of hospital or training school in a hospital where a high-grade disciplinarian and teacher is required; ten years' experience in institutional work and management of hospitals; modern methods. Address M. C., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

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POSITION—As assistant superintendent of training school, or supervisor of operating department; experienced, economical, enjoys teaching; would consider superintendency of hospital without training school; southern states preferred. Address N. Y. Graduate, THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

POSITION—As superintendent or assistant superintendent of hospital or sanitarium; ten years' experience; now assistant superintendent of hospital of 150 beds; married; wife supervisor of nurses at the same hospital; for good reasons wishes to make a change; best references. Address C. W. M., THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

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NURSES—Write if you would like hospital position. Hospitals, write if you need nurses. The Halbur Exchange, Halbur, Iowa.

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NURSES—Graduate nurses desiring institutional positions. We have calls for nurses from all parts of this country. If interested in hospital positions, write us today. Aznoe's Central Registry for Nurses, 3544 Grand Boulevard, Chicago.

SUPERINTENDENT—Wanted by September 15th for a small up-to-date hospital in northern New York, a superintendent to take entire charge; must be good teacher and disciplinarian. Apply, with references, inclosing photograph and stating age, experience, and salary expected, to Jay O. Ballard, THE MODERN HOSPITAL, Metropolitan Building, St. Louis.

Classified advertising continued on page 50.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Aaministration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. III *September, 1914* No. 3

MEAT HYGIENE IN THE UNITED STATES—ITS VALUE AND SCOPE.

A Seven-Year Study of United States Government Meat Inspection—Slaughtering and Preparation of Meat Foods Under Scientific Control—Importance of a Sound and Wholesome Meat Supply Assured in Purchase of Products Marked "U. S. Inspected and Passed"—States and Municipalities Do Not Realize the Importance of Thorough Meat Inspection.

By W. H. LIPMAN, M. D., Chicago.

(This paper was prepared at the urgent request of The Modern Hospital, because it believes that proper, scientific inspection and the proper treatment of meat is one of the most important factors in the health of the people. Dr. Lipman, chief medical officer of Swift & Company for the past nine years, is better qualified to write on this subject from first-hand knowledge, and because of his capacity to evaluate its importance from the standpoint of the public health, than almost any other man in the country.)

IN these days, when sanitation and hygiene are uppermost in the mind of the public, and new measures of relief—legislative, economic, and scientific—are springing up daily, a brief survey of the measures employed in the care and protection of meat, the most important of all of our foods, seems timely.

That man has been a meat-eater, if not always, at least for countless ages, is vouchsafed by anthropologists. The construction of our teeth and digestive organs, we are told, convicts us of flesh-eating as easily as the jam on his fingers and lips convicts Johnnie of a visit to the pantry without the consent of "mamma." Our canine teeth speak with eloquence of steaks and roasts consumed without the aid of knives and forks, and our gastric juice is so meat-hungry it would gladly feast canibalistically on our stomachs were it not for the alkalinity of the blood neutralizing the hydrochloric acid and the "vital" protection afforded by the cells of the lining of the stomach. As if that were not sufficient, paleontologists claim to have conclusive evidence that our ancestors banqueted in their caves on the flesh of animals and fish.

It is pretty well established that if man is to meet the more and more arduous tasks imposed on his brain and brawn by civilization—in fact, if civilization itself is to march on—man must remain an omnivorous feeder, at least in temperate zones. Present-day mankind needs concentrated, enticing fare, with not too much indigestible ballast, that will give energy, daring, endurance, and resistance, as well as rebuild the tissue waste. Such a diet can be obtained only by judiciously mixing vegetable and animal foods. A purely vegetable diet falls just as short of our needs as one made up wholly of animal foods. The first may make us plump and rosy, but it leaves us without resistance to disease and soon disarranges our digestion, and the second would finally make us sluggish and lazy.

It is true that some savage tribes live almost entirely on plants, leaves, and fruits, and the Esquimo subsists on animals and fish, but these cousins of ours have not contributed very heavily to the arts and literature, nor are their names very closely linked with many of the great discoveries in science.

Some carnivorous enthusiasts claim to be able to show a direct parallelism between the achievements of a people and its per-capita consumption of meat, and the vaunted greatness of our own country has been ascribed to our high meat consumption, which is greater than that of any land save Australia. The United States Department of Agriculture gives our per-capita consumption per annum, based on the 1910 census, as follows:

Beef	80.34 pounds.
Veal	7.54 pounds.
Pork (excluding lard)	67.61 pounds.
Mutton and lamb	6.58 pounds.
Goat meat	.13 pounds.
Total meat	162.20 pounds.
Lard	10.06 pounds.
Total	172.26 pounds.

Bauer believes that the benefit usually ascribed to a change from a mixed diet to one purely vegetarian is mainly due to giving up of bad habits formerly indulged it.

Our forefathers in the very early times seem to have been rather careless in the selection of their meat, for history credits the first attempt at what might be termed meat hygiene to the Egyptians. The hog was not eaten by those people, because "it produced bad humors," and the bovine animal was considered closely related to certain deities, and therefore too sacred to be used as food. When Moses led his people from the land of Pharaoh he borrowed the Egyptian food laws, which he later elaborated to the extent of prohibiting the use of emaciated, injured, and "died" animals. The Mosaic law was also selective in that it designated certain animals as fit for food (ruminants, domestic fowls, birds, except birds of prey, and fish having fins and scales), while solipeds, hogs, etc., were considered unclean. The Talmudists enlarged on these laws and prescribed specific methods of slaughter. The Greeks forbade the use of lambs that had not been shorn once, and the Romans looked on goat meat as unhealthful.

The meat markets of early Athens were under police supervision, and well-equipped abattoirs with meat inspection existed in early Rome (Ostertag). The early popes issued food edicts, such as the prohibition of the use of horse meat and the consumption of raw bacon and pork. There are no authentic records of meat inspection among the ancient Gauls and Germans and in northern Europe (Edelman). From time to time the Church and civil authorities issued meat restrictions, which referred mainly to emaciated, immature, and "died" animals and "pearl disease."

What may be termed the first scientific food restrictions appeared at the end of the eighteenth century, and were based on the medical opinion of those days, but, as can readily be understood, the diversity and uncertainty of the prevailing medical thought hampered rather than enhanced the development of meat inspection. When the causes and means of spreading of many of the infectious diseases became known as a result of the discovery and development of bacteriology, the need of scientific supervision of the meat supply became apparent, and today practically every civilized country has a more or less thorough control over it.

Meat may become dangerous as a food in three ways:

1. Animals may be affected with a disease communicable to man, or may be so changed as a result of a noncommunicable disease as to become objectionable.

2. It may contain noxious substances as a result of putrefactive changes.

3. It may be the medium for carrying of bacteria without becoming changed itself.

The first condition can be remedied only by thorough ante- and post-mortem examination by trained pathologists and veterinarians, and the other two can be obviated by efficient means of preservation.

By far the most important condition found post-mortem is tuberculosis. Everyone who has studied the question of tuberculosis is familiar with the controversy that has been waged since Robert Koch announced in 1901 that the possibility of man becoming infected with animal tuberculosis is so remote as to make precautions unnecessary. He placed the danger from the animal form as equal to the danger from hereditary transmission of human tuberculosis, which is tantamount to saying that it is nil. We all know the storm of opposition that Koch's dictum called forth, and which finally culminated in the practically unanimous opinion of today that man can be infected with the bovine bacillus, although much less readily than with the organism of the human type.

Even the most ardent supporters of the identity of both forms of the disease agree that the greatest, if not the only, source of infection of human beings with the animal form is milk. This is proven by the fact that the greatest number of cases in which the bovine bacillus was found occurred in children. While milk was repeatedly found to be the medium of infection in children by clinicians in this country and Europe, one will search the literature in vain for a case in children or adults that can be attributed to meat. But because experiments on human beings to determine that point are obviously impossible, and because tuberculosis is the most common disease of cattle and hogs, the importance of recognizing that disease becomes apparent.

The first Federal meat inspection law in the United States was passed in 1890 by Congress, and provided for inspection at time of packing of bacon and pork intended for export. This law was amended repeatedly. In 1906 Congress passed a law which gave power to the secretary of agriculture to make ante- and post-mortem inspection of all cattle, swine, sheep, and goats that enter in-

terstate or foreign commerce, and reinspections whenever required. In addition to the inspection, the law provided for the destruction of all carcasses and parts that were found unfit for food. It also prescribed certain sanitary requirements for establishments where meat and its products are prepared, as well as the supervision of all processes of meat manufacture. Accordingly regulations were formulated which were to determine when a carcass may or may not be passed for food, and these regulations, with slight modifications, are still in force. They are based on modern authoritative scientific opinion on animal pathology and the etiology of disease, and are not only equal to those of European countries from the standpoint of stringency and thoroughness of execution, but are more rigid than those of many of them.

A comparison of the regulations of the leading European countries will soon disclose the fact that enormous quantities of meat and its products are annually condemned in this country under United States Government inspection, especially on account of certain forms of limited tuberculosis that would be passed for food in many European countries, either under declaration as meat of inferior quality or after heat sterilization. These statements are made unhesitatingly, and they are not based on a mere perfunctory digest of figures and reports. They are the result of a study of Federal meat inspection covering several years as it is conducted in the great packing houses in Chicago and those of the western packing centers.

From time to time some person arises who considers it his or her duty (usually self-imposed) to criticise the United States Government meat inspection. It is declared inadequate and unscientific, and devoid of hygienic value. When these attacks are investigated, they are found to emanate from persons not possessed of the necessary scientific training and experience to pass on this important subject intelligently and impartially. It is found that these critics, in their eagerness to criticise, consider it unnecessary to quote the regulations in their entirety or describe the inspection as it is actually performed, but conveniently omit everything that does not lend itself to their purpose.

In 1907 the secretary of agriculture appointed a committee of scientists, not in any way connected with the Federal meat inspection service, to study and report on the regulations governing it. The committee was composed of the following: Dr. Wm. H. Welch, professor of pathology, Johns Hopkins University, Baltimore; Dr. L. Hektoen, professor of pathology, University of Chicago; Dr. Joseph Hughes, president of the Chicago Veterinary College; Dr. V. A. Moore, professor of comparative pathology, Cornell University; Dr. Leonard Pearson, dean of veterinary department, University of Pennsylvania; Dr. M. J. Rosenau, director of hygienic laboratory, United States Public Health and Marine Hospital Service; Dr. Chas. Wardell Stiles, chief of division of zoology, hygienic laboratory, United States Public Health and Marine Hospital Service. The committee's opinion of the regulations is well illustrated by the following statement, quoted verbatim from its report:

> "In general, the regulation in question fully safeguards the public health in so far as the points contained in regulation 15 are concerned. If there be any general error in the regulation, this is in favor of the public rather than in favor of the butchers and packers. Most of the paragraphs of regulation 15 are indorsed without comment. Several sections (for instance, the sections on hog cholera, swine-plague, actinomycosis, tuberculosis, and tapeworm cysts) could be made less stringent without any danger to the health of the consumer."

Anyone familiar with the high scientific attainments and unimpeachable integrity of the personnel of the committee will readily understand the weight and importance of its report. Whatever changes have been made in the regulations since the passage of the law of 1906 have been made either on the recommendations of the committee mentioned above or in accordance with new ideas governing animal pathology.

The consensus of modern thought on the spread of tuberculosis is gradually crystallizing in the opinion that infection takes place in childhood (at a period when little, if any, meat is consumed), and lies dormant until such time in adult life when the body resistance becomes low, permitting the awakening and development of the disease. This mode of infection lends more strength to the proposition that meat rarely, if ever, becomes a medium for the transmission of tuberculosis to man.

No country is rich enough to be able to afford to destroy sound meat food on purely sentimental grounds. The selection of the sound and healthful from the objectionable must be made in the light of cold, searching scientific facts, and judgment must not be swayed either by sentiment or economic advantage.

An idea of the importance and extent of Federal meat inspection can be gained from the following tables, taken from the report of the chief of the Bureau of Animal Industry for 1912:

POST-MORTEM INSPECTIONS, FISCAL YEAR 1912.

Kind of animals.	Passed for food.	Condemned.
Cattle	7,447,227	50,363
Calves	2,233,984	8,927
Sheep	14,192,420	15,402
Goats	63,898	84
Swine	34,689,866	129,002
Total	58,657,395	203,778

DISEASES AND CONDITIONS FOR WHICH CONDEMNATIONS WERE MADE ON POST-MORTEM INSPECTION, FISCAL YEAR, 1912.

Causes of condemnation.	Cattle.		Calves.		Swine.		Sheep.		Goats.	
	Carcasses.	Parts.	Carcasses.	Parts.	Carcasses.	Parts.	Carcasses.	Parts.	Carcasses.	Parts.
Tuberculosis	35,273	51,576	276	289	42,267	314,581	3	.....	...	...
Actinomycosis	726	71,665	7	345	.....	.....	.....	.....	...	...
Caseous lymphadenitis	.....	.....	.....	.....	.....	.....	1,597	.....	18	...
Hog cholera	.....	.....	.....	.....	56,931	.....	.....	.....	...	...
Tumors and abscesses	190	4,840	17	165	1,654	2,247	122	31	3	1
Septicemia, pyemia, and uremia	1,468	.....	326	.....	8,607	.....	780	.....	6	...
Pregnancy and recent parturition	560	.....	.....	.....	71	.....	70	.....	1	...
Immaturity	.....	.....	4,511	.....	.....	.....	.....	.....	...	...
Pneumonia, pleurisy, enteritis, hepatitis, peritonitis, metritis, etc.	3,092	.....	841	.....	8,997	.....	2,614	.....	12	...
Icterus	40	.....	37	.....	2,975	.....	1,308	.....	2	...
Texas fever	381	.....	806	.....	.....	.....	.....	.....	...	...
Injuries, bruised, etc	1,892	813	429	69	728	5,916	725	113	3	...
Sexual odor	.....	.....	.....	.....	2,456	.....	.....	.....	...	...
Asphyxiation	.....	.....	.....	.....	967	.....	32	.....	1	...
Emaciation	5,722	.....	1,574	.....	1,568	.....	7,542	.....	29	...
Cysticercus	359	1,944	3	3	9	.....	197	44	1	...
Miscellaneous	660	3,945	100	341	1,772	1,248	412	3,683	8	...
Total	50,363	134,783	8,927	1,212	129,002	323,992	15,402	3,871	84	1

In addition to the foregoing there were tanked animals found dead or in a dying condition as follows:

Cattle	762
Calves	983
Swine	44,778
Sheep	5,162
Goats	10
Total	51,695

Such figures are significant and important. They prove that the inspection is more than an academic procedure and a political subterfuge, as has been charged. They prove to the careful and unbiased observer that our meat foods, when passed by the Government, are as healthful and wholesome as science can make them. They prove that the inspection is a tremendous hygienic force and a factor of inestimable value in preserving public health.

The question has been asked why the Government reports do not show carcasses condemned on account of such conditions as anthrax, rabies, tetanus, black-leg, etc., although they are included in the regulations. The answer is very simple: anyone familiar with these diseases will readily understand that an animal affected with any one of them can never reach the market. It would either perish or it would be destroyed by the local state veterinary authorities.

There is nothing mysterious or hidden about the inspection. The regulations are available to anybody who will apply to the Government for them, and anybody can at any time enter the establishments where inspection is conducted and follow it minutely. Anyone can study the method and technic used by the inspectors and see the carcasses as they are either passed or condemned, and can follow those that have been condemned to the tanks into which they are placed for destruction.

The disposition of carcasses is made by trained veterinarians graduated from veterinary medical schools, who have also passed a civil service examination before being admitted to the Government service. The Government prescribes certain requirements of equipment and teaching with which veterinary schools must comply if their graduates are to be admitted to examination for the position of veterinary meat inspector. At present the inspection service includes 3,453 employees, 1,063 of whom are graduated veterinary surgeons, 965 men experienced in meat packing, the remainder being composed of stock examiners, inspectors' assistants, etc.

The post-mortem inspection commences immediately after slaughter, and every part is examined as soon as it is brought to view in the process of dressing by the butchers. It includes a careful observation of the whole carcass and viscera for pathologic changes, and palpation and incision of the more common sites of disease, especially the lymphatic glands. For convenience of description, the technic may be briefly divided as follows:

1. Inspection of the head. Palpation and incision into the post-pharyngeal, submaxillary, and parotid lymphatic glands and salivary glands; incision into muscles of mastication in cattle and calves for cysticercus, examination and, if necessary, incision of tongue; general observation of head as a whole for deformities, etc.

2. Inspection of viscera. Palpation and incision into bronchial and mediastinal glands and lungs; incision of heart for cysticercus; incision of portal, hepatic and mesenteric glands; observation, palpation, and incision, if necessary, of liver and spleen; close observation of all abdominal organs for changes in color, size, consistency, the presence of animal parasites, abscesses, inflammations, etc.; examination of uterus and adnexa.

3. General survey of entire carcass. Close observation of the serous membranes after the carcass is split; examination of all parts for changes in color, state of nutrition, deformities, abscesses, new growths, injuries, etc.

4. Special examinations. Some animals are subject to affections peculiar to the species or locality, as Texas fever in cattle and calves, caseous lymphadenitis in sheep, hog cholera, etc., and a special search is therefore made for them in the carcass and organs involved.

The above constitutes the preliminary examination, and, if some abnormality of the slightest de-

Fig. 1. Examination of head and neck glands of hogs.

gree is found in any part or organ, a tag is placed on the carcass and viscera, reading "U. S. Retained," and the carcass, with all the viscera, is removed to the so-called "final room" for final examination. Here the examination is much more comprehensive than the preliminary one. All the lymphatic glands of the body which may be the seat of disease are exposed and incised. The viscera are examined minutely, as well as the whole carcass. When a carcass or part is condemned, it is immediately stamped with ink in numerous places, "U. S. Inspected and Condemned," and is either conveyed to the tank for destruction at once or placed in the "condemned room" and destroyed as soon as practical.

By destruction is meant that the condemned carcass or part is placed in a tank, together with denaturing material; the tank is sealed by a Government inspector and the contents allowed to render by steam under a temperature of 288 degrees F. under high pressure for no less than six hours, and no one but the inspector is allowed to open the seal of the tank. At the end of this process all the tissues have been reduced and dissolved, leaving nothing but liquid fat and a residue composed of mineral and proteid matter. The denaturing material used so changes the fats and other tissues as to make their use for any other but technical purposes impossible.

Those carcasses that are found to be normal on preliminary examination are marked "U. S. Inspected and Passed," and are sent to the "chill room." That does not, however, mean that they have passed out of the jurisdiction of the inspector; if at any time in the chill room, shipping room, or anywhere else a carcass or part is found unwholesome, it is condemned.

An ante-mortem inspection is made in the yards and in the pens of the establishment. It is obvious that such an inspection, which may be termed clinical, cannot be conclusive; it can suspect only abnormal conditions. When an inspector finds an animal that does not look normal to him, he attaches a metal tag to its ear, reading "U. S. Sus-

Fig. 2. Examination of pleural and peritoneal surfaces of hogs.

pect." An animal suspected in that way must be killed apart from the rest, and is passed on in accordance with the ante- and post-mortem findings.

The inspection of the carcass and its several parts and organs immediately after slaughter by no means ends the care exercised by the Federal Government to prevent unwholesome meat from getting to our table. The modern meat packing

industry is a complicated and refined science, and is based to a great extent on the principles of chemistry and physics. The processes of preparation of those toothsome hams and bacon that have made the American breakfast table so attractive, and of those canned meat delicacies that our

Fig. 3. Taking record of condemned hogs preliminary to placing them in tank for destruction. Note the stamp, "U. S. Inspected and Condemned."

housewives find so convenient, involve a system of successive steps that require accuracy and precision, and some of these processes are spread over weeks of time. The Government inspector is constantly on the watch for these meats, and ever ready even to the very minute they are packed for shipment to placard them with his "U. S. Inspected and Condemned" tag that will send them to the tank.

The Government takes samples of the curing mixtures and other material, even the water used, and chemic and bacteriologic examinations are made of them in the laboratories located in packing centers for that purpose. In that way the Government knows at all times just exactly what is used.

For the fiscal year 1912 the chief of the Bureau of Animal Industry reports the quantity of prepared meats condemned as follows:

Beef	7,911,761	pounds.
Pork	9,937,949	pounds.
Mutton	192,326	pounds.
Veal	52,934	pounds.
Goat meat	1,617	pounds.
Total	18,096,587	pounds.

Meat, though it may come from a perfectly healthy and sound animal, may become unwholesome by reason of contamination when handled in an unsanitary manner. Proper sanitation is, therefore, a very important and prominent feature of Federal meat inspection. To begin with, plans and specifications of establishments desiring inspection, as well as plans of new plants and those to be

Fig. 4. Examination of cavities of cattle.

changed, must be submitted to the secretary of agriculture for approval. The Government thus gains intimate knowledge of the physical construction of the premises where inspection is conducted.

Space does not permit a detailed description of all the sanitary measures required by the inspec-

tion regulations. They embrace not only proper light, ventilation, drainage, and heating of the buildings, and the construction of floors, ceilings, approaches, etc., from easily cleaned material, but they go into detail about the cleaning of all trucks, tables, and other receptacles, knives, saws, and other tools used in the process of handling meats and their products. The thorough cleaning and disinfection of contaminated tools and hands of the inspectors and workmen are insisted upon. The clothing, uniforms, and aprons of all the workmen are washed daily.

The important part of it all is that all the sanitary requirements are complied with to the minutest details. The expressions of approval from the steady stream of visitors pouring daily into the great plants of Chicago's Packingtown are unimpeachable testimony to that fact. As mentioned before, these plants are always open to the public and the people can see for themselves.

To describe the meat inspection regulations in all their phases and the methods employed for their enforcement in detail is obviously beyond the scope of a single article. The aim of the writer has been to point out the salient facts to prove the general contention that United States Government meat inspection is a serious and thorough procedure, with a definite purpose based on sound, well-recognized principles, and he hopes that his aim has been accomplished.

If all the meat killed in this country and offered for sale to the public were inspected by the Federal government, our entire meat supply would be ideally hygienic, and no one would need have any apprehension about its healthfulness. Unfortunately, that is not the case. As mentioned before, the law of 1906 covers only those meats that are shipped interstate or exported to foreign countries. It has no jurisdiction over meat killed and sold in the same state. At present only 60 percent of the total meat killed and consumed in this country is under Federal inspection; the remaining 40 percent represents what is killed for local consumption by farmers and butchers. The meat from these sources receives practically no inspection at all. It is true, some states and municipalities have inspection laws, but they are usually inadequate or not enforced. It can be readily seen that such meat is not always wholesome, and may at times be dangerous. It is reasonable to assume that the same percentage of animals killed by farmers and local butchers is affected with the same conditions that are found in those killed in establishments under Federal inspection. Very likely they are more frequently and more extensively affected, because the soundest and best nourished animals are sent to the big markets, where they bring the best prices.

Of course the average farmer and butcher can be relied on not to market unwholesome meat knowingly, but the danger lies in his selling unwholesome meat not knowing it is unwholesome. He may be able to recognize gross extensive lesions—for instance, of tuberculosis, or a maiming injury—but many conditions far more dangerous than these will easily escape him because he has not had the necessary training. The sanitary condition surrounding the handling of uninspected meat can be easily imagined.

There is a way by which the consumer can secure sound meats, and that is by taking nothing

Fig. 5. Examination of cattle in "final room." Note examination of all viscera as well as entire body.

but meat bearing the "U. S. Inspected and Passed" stamp. That would soon cause the dealers to realize that it is for their own benefit to have Federal inspection, and it would also force municipal and state authorities to inaugurate competent inspection in the absence of Federal inspection. The steady increase in the number of establishments asking for Federal inspection year after year proves that contention. The number of such establishments has risen from 9 in 1891 to 935 in 1914.

No modern housewife would think of buying her bread, her sugar, or her vegetables in an unclean store, or in a store that recently harbored a contagious disease, but how many housewives think of inquiring about the source and purity of the meat they buy? It seems rather negligent on the part of our otherwise progressive American women. But let us not convict her too hastily.

She does not know the facts, not having been informed about them.

There is a tendency nowadays among circles engaged in hygienic work of a public nature to take the public in their confidence, so that it may benefit by the work accomplished. The American Medical Association is coming more and more to recognize the value of legitimate, dignified publicity in promoting preventive medicine, and the association has undertaken several steps to bring within the reach of the general public the facts about what is being done and what can be done to improve public health.

It is hoped that Federal meat inspection will receive the recognition it deserves. It is a work of magnitude and of far-reaching importance in its results.

CONCLUSIONS AND RECOMMENDATIONS.

1. The United States Government meat inspection is a thorough and effective practice of great hygienic value.

2. Because the meat law of 1906 covers only those meats intended for interstate and foreign shipment, state and municipal authorities ought to promote inspection, as far as possible, of the local meat supply coming from sources not under Federal inspection.

3. Because of the great economic loss to the country through the condemnation of meats, measures to eradicate those conditions affecting food animals which cause their condemnation are indicated.

The United States Department of Agriculture is doing effective educational and field work toward the eradication of the most important of these conditions, notably hog cholera and tuberculosis. Laws exist in many states for the control of tuberculosis among cattle coming from other states for breeding and dairy purposes, and measures exist in many states for the testing of cattle for tuberculosis and segregation or slaughter of certain reactors. That these measures are inadequate is seen from the fact that tuberculosis in cattle and hogs coming to slaughter is increasing constantly. Lack of uniformity and cooperation is probably the cause of the ineffectiveness of these measures.

4. Because tuberculosis is the most common cause of condemnation of cattle and hogs, and because milk is the most potent, if not the only, medium of infection of man with bovine tuberculosis, measures must be undertaken to insure a pure milk supply.

This function must be assumed by municipal health authorities for the present. The medical profession has a distinct duty to perform in educating the people to the importance of pure milk.

HOSPITAL ORGANIZATION AND ACCOUNTING SYSTEM.

Books Should Be Kept by Units, and Heads of Departments Should Be Held Responsible —Accurate Records on Proper Forms Necessary—Distribution of Cost of Goods Bought in Bulk Over Whole Time of Their Use Must Be Made.

By HENRY M. WECHSLER, B. C. S., C. P. A.,
OF WECHSLER & MILLS, PUBLIC ACCOUNTANTS, NEW YORK.

THE questions dealt with in this article have grown to much importance in recent years, owing to constant and complex economic changes in this country, and they must grow more important in the future.

Not many years ago it was possible for an individual to engage in an undertaking, and, by perseverance, hard work, and the application of certain elementary principles, succeed. In the last decade, however, with the advent of new conditions, the principles governing business operations have grown to such an extent that only with the aid of science can one hope for success. It makes little difference whether the undertaking is operated for profit, or, supported by voluntary contributions, is operated for a charitable purpose. The necessity for the application of scientific principles in order to efficiently and economically operate any undertaking has become imperative. The industrials and railroads have long since realized this. It is only within a comparatively short time that the managers of eleemosynary institutions have begun to investigate this matter so far as it applied to them. That they should only now realize the importance of scientific management is due, in a great measure, to the indifference of the supporters of such institutions in the past—the increased cost of maintenance may have been, however, the impelling force.

The success of a mercantile undertaking is measured by the amount of profits it can earn. Following this simile, the success of a hospital should be measured by the amount of good work it can do at a minimum cost, or, given a sum of money, it should be made to do so much more good work than before the application of the new principles. A clearer understanding of the principles involved and the ideals for which a hospital should

strive would tend to bring about the desired object.

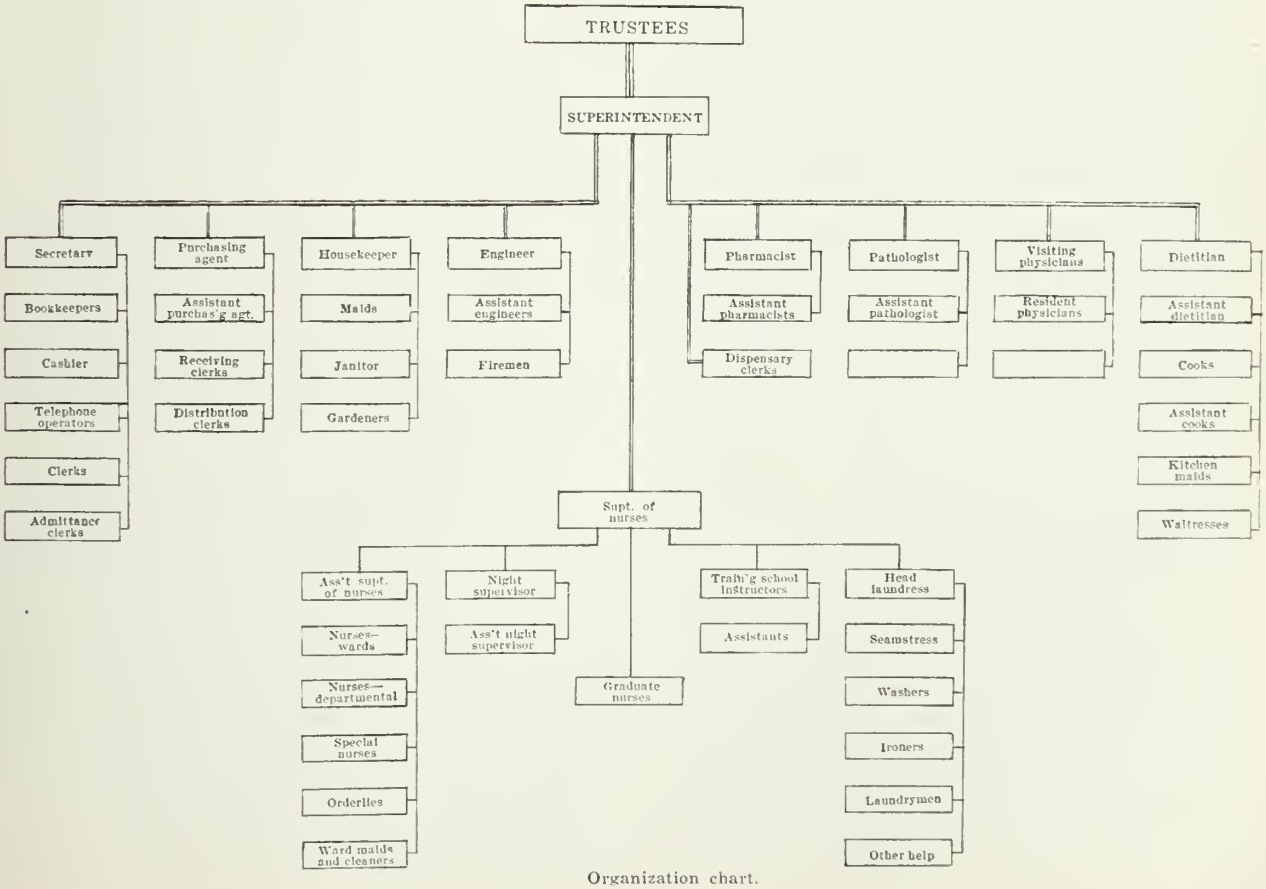
The points I purpose to discuss here are of practical value, being based on my personal experience of many years as an auditor and systematizer of hospitals. The many hospitals that have come under my notice have, in principle, an organization divided into many units. The principle is good, but the deficiency arises in that the duties and responsibilities of each of the departmental heads of the units are not clearly defined, and the tendency, therefore, to overlap on each other's duties is usually very marked. To allocate these duties and responsibilities properly would require the services of an expert who could make a study of prevailing conditions in accordance with a well-conceived classification, assigning to the subordinate officers duties for which they would be held responsible.

The organization of a hospital will, of course, depend on the arrangement of its buildings. I present here the following chart, showing the organization of a hospital having a capacity of 300 beds, and which, with certain modifications or amplifications, could be followed by many hospitals, if not by all, small and large.

The organization as herein outlined, it will be noted, places the departmental heads and employees in their proper relation, but it must be borne in mind that no organization, however complete as to its personnel, can perform the functions assigned without proper records. This, then, is the next step to be considered.

It would be an easy matter to devise a system which would consider the operations of a hospital as one unit, but that is not desirable for obvious reasons. The cost of maintaining one unit or department may be higher or lower than another, and therefore the hospital must be so divided as to give the necessary data with the least possible effort and expense. There are in most hospitals six principal units—i. e., medical ward, surgical ward, obstetrical ward, private pavilion, children's ward, and dispensary. Their location cannot, of course, be changed, but each unit should be clearly defined as to its location, since this has much bearing on the methods of distributing the expenses, uses of records, requisitions, etc. Next to these units, attention must be given to the departments, of which there are many.

Another feature to be considered at this time is the location of the store rooms; on their accessibility will depend the success of any system. It is needless to state that they should be located at central points, where the receipt and disbursement of supplies would be facilitated. A purchasing agent or steward should be placed in charge, assisted by one or two clerks, as the necessity may arise. He should be given authority to purchase



Organization chart.

all supplies, except the drugs, the purchase of which requires technical knowledge. The dispensing of supplies, on duly approved requisitions, may be vested in one clerk. Necessarily, records should be maintained that will keep track of the supplies as received and distributed, and from the receiving slips and requisitions a summary or analysis sheet can be prepared. A copy of this summary should be rendered monthly to the office for record. If this sheet has been prepared properly, no difficulty should be experienced in ascertaining the monthly charges to each unit and department. It should be observed that the above refers to supplies actually consumed.

Most hospitals consider the purchase of any supply as an expense the moment it is received. That this method is not correct may be seen by taking coal as an illustration. It is usual to purchase coal during the summer months in a sufficient quantity to last over the winter months. Assuming that one hundred tons have been purchased, it can readily be seen that, unless this item of expense is distributed as consumed, the month in which the purchase was made would be burdened with an expense not belonging to it.

This brings us to the question of inventories. Any system of costs that is not controlled by the financial books will prove defective. It is therefore necessary to create accounts in the books which, with the aid of proper forms, will record the operations of the hospital and at the same time show, monthly, the balance of supplies on hand. These monthly balances, as shown by the financial books, should be reconciled not only with the balances shown in the stock records, but exhaustive tests made of the larger items by an actual physical count. It is, however, always desirable to take an actual inventory monthly and reconciliation made with the books. With respect to other charges, such as light, heat, water, etc., and accruals which have to be included in the monthly operations, they would first have to be ascertained and then prorated according to the patient days or according to the area of each unit. Two elements of cost would thus have to be considered, viz.: actual and accrued.

An accounting system for a hospital, if it is to serve any useful purposes, should have for its object the allocation of the earnings and the determination of the cost per patient day in each unit—medical, surgical, obstetrical, etc.—the cost of each department, the cost of maintaining a training school, etc., without involving too much detail. The usefulness of such a system may be gathered from the following monthly statement, extracted from the first report prepared for a hospital in which a system as herein dealt with was installed:

EARNINGS AND EXPENSES, BY UNITS AND DEPARTMENTS, FOR THE MONTH ENDED DECEMBER 31, 1912.[1]

Items.	Earnings.	Expenses.
UNITS—		
Medical ward	$ 1,130.79	$ 2,265.38
Average per patient day	.365	2.138
Surgical ward	979.58	1,995.08
Average per patient day	.997	2.069
Obstetrical ward	1,367.88	1,475.42
Average per patient day	2.067	2.671
Private pavilion	4,125.68	3,959.87
Average per patient day	3.423	3.156
Children's ward	1,496.48	3,740.53
Average per patient day	.731	2.563
Dispensary	630.25	1,707.73
DEPARTMENTS—		
Surgery	807.00	808.53
X-ray	202.25	225.40
Miscellaneous earnings	809.11	.....
Total	$11,549.02	$16,173.94

The cost of nurses for the month was $3,085.85, or an average of $0.897 per nurse per day.

A detailed explanation of the manner in which these amounts were determined would involve a very lengthy article, which would accomplish little, since no "cast iron" system can be outlined that could be installed without involving too many changes to meet the individual requirements.

A statement of the character shown above, if rendered to the superintendent and trustees every month, would accomplish two things: first, prevent leakages in any department, and, second, keep the expenses within a proportionate limit consistent with good work. No mention is here made of the earnings, since it is admitted they cannot be controlled, varying with the kinds of patients admitted, nor of the contributions, membership dues, etc., since these items of income, not having to do with the actual operations of the hospital, should be considered separately as affecting the deficit of the year's operations.

In conclusion, let the system be devised and installed by those who, by virtue of possessing the necessary scientific knowledge and practical experience, are most qualified to do such work.

[1]This was the first monthly statement prepared under the new system, and the averages per patient day are high, though actual. It is interesting to state here that during the first half of the year the averages were reduced to almost one-half. These reductions continued until the end of the year, when the averages became so low that no comparison could be made with the results shown in the first month. The low averages have continued since.

A pamphlet issued July 1 by the National Association for the Study and Prevention of Tuberculosis offers a strong argument against the notion that an institution for the treatment of tuberculosis is a menace to the health of those living near it. The pamphlet is a review of investigations made in one hundred and fifty communities where sanatoriums are maintained, and it is stated that not one case was found where assertions to the effect that an institution of this kind would spread disease could be substantiated. Dr. Edward L. Trudeau, who in 1885 built the first tuberculosis sanatorium in the United States, the Adirondack Cottage Sanatorium, of which he is still the head, is quoted as saying that, to his knowledge, there has never been an employee who came to the sanatorium in sound health who developed tuberculosis while there. Dr. Trudeau is of the opinion that the health of a community is no more endangered by a sanatorium built in its midst than it would be by one placed on the top of a mountain miles away.

THE RELATION OF WORK TO SOCIAL SERVICE.

Dissection of the Mind of the Patient Must Be Made—His Past History and Causes That Led to Disability Must Be Known Before Wisest Help Can Be Decided On.

By MARY IRVING HUSTED,
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OF what value is industrial work to the individual patient?

A woman suffering from chronic arthritis, after weaving for two hours each day during three weeks, finds the stiffness of her joints lessened.

A man who is depressed as the result of mental overstrain becomes interested in carpentry and in physical effort finds mental relief.

A woman who is nervously overwrought regains self-control through the power of concentration acquired by doing leather carving.

A woman suffering from traumatic neurosis regains her power of "doing things" through assisting in simple craft work.

Such cases are typical in our industrial department, where the possibilities of individual helpfulness are being similarly studied. It is true that to the casual observer these pupils at work on a variety of crafts seem to be simply amusing themselves, for there are as many well people as sick people in these rooms, and the atmosphere is one of good cheer; but the teacher, who knows the physical condition of each "patient," is doing her best work, not in the cultivation of correct technic, but in helping that patient, through the careful use of manual work, to overcome some handicap or to regain mental poise.

"The world is primarily a working world. From the insects to the angels, creation hums with work, and through work fits us for play."[1]

The child who is considered too delicate for study plays his way into a manhood of helpfulness, undisciplined and unfitted to take his place in the world. The son of a millionaire may drive his four-in-hand, but when his three score and ten years are told off (if he has the stamina for three score and ten), what record that is worth while is left behind? How has this earth benefited by his personality? We read the first pages in the biographies of great men and great women, and in the light of what they became we see the factors in their lives which developed possibilities of usefulness—inheritance. And hand in hand with the gift of a past we find the gift of a present, the necessity of earning a living; the gift of that tremendous energy, *work*, demanding concentration, knowledge, self-sacrifice, opening the doors of usefulness and of insight into the meaning of life.

The thinking father and mother of the twentieth century do not leave their sick child to play with a nurse through all the hours of the day, but teach him to use wisely whatever strength of body and of mind is his, and by the using help him to develop physically and mentally. The rich father is begging to send his blasé son to Labrador to meet life on a primitive footing under the leadership and guidance of Dr. Grenfell. Work is fundamental in development. He who studies the history of education notes how the pendulum has swung back and forth between methods where the boy is forced to buckle down to a working out of his own problems, often undoubtedly too narrow in their scope, to methods where the boy leans back in idle contemplation of the ardent efforts of his teacher to do the work needed by his own brain—efforts meant to inspire interest in the subject in hand, but by this very method robbed of the expectancy of self-discovery and of the value of mental training.

We are beginning to get the results of so-called "modern education." What do we onlookers see? Much of buoyancy and of the individual in personality which we all want, but is there not something missing, a need which is bound to be felt as this young army takes its place in the ranks of those fighting life's battles? a lack which is already accounting for the fact that many a young person is proving unequal to the demand of his or her life. A short time ago a man said to me, "I can find plenty of young people, wideawake and interested, to help me in my work, but I can find few who are capable of doing work *accurately*—who seem able to follow directions exactly as they are given." A prominent physician, a nerve specialist, said to me recently, "I am going to take my children out of the school in which they are, and put them where they will be taught to *work*. I don't care if they study only the 'Three R's.'"

It is for others, specialists in the study of child education, to face these questions and to evolve methods which shall develop the personality of each child, at the same time teaching him self-control and such power of concentration and accuracy of thought that he may be counted on in later years to meet the exacting demands of life in a world which exists by law and order.

My own opportunity of helpfulness lies not with those looking forward to life's battle, but with

[1] Richard C. Cabot, M. D., "What Men Live By—Work, Play, Love, Worship."

those who have already been on the field, who have tested their spurs and found the metal untrustworthy. Many have won frequent victories, then have fallen. Some have never been beyond the rear of the army, but were full of enthusiasm—and they have been laid low. It is for us who are working with the physician to study that we may understand each of these comrades; to face the all-important question, Why has he proved unequal to the demands of his individual life, and, with the skill and scientific care of his physician to count on for the patient's physical relief, to strive to work with that physician in rebuilding lost poise and efficiency.

To repeat, the first question we must ask ourselves is, Why has this man or woman given out in life's battle? The second question is, How may we help this person back into the fight, equal to the strain, mentally keen for the struggle?

The rapidity with which during the past ten years sanatoriums and hospitals in many parts of the world have come to include industrial departments in their equipment bears sufficient testimony to a recognition of the value of handwork for patients. The nature of the industries naturally varies with the special needs of the different institutions. In hospitals for the insane we find chiefly weaving, coarse basket making, chair caning, and sometimes lace making—industries in which the worker may follow simple directions, and be fairly sure of good results with slight expenditure of nervous energy. The deft fingers of the blind are doing finer and more elaborate weaving. Cripples are learning that there are forms of handwork in which they may excel and by means of which they may earn an honest livelihood. At Sharon, Conn., the experiment of a cement industry for cardiac cases is being tried out, and in hundreds of places the "nerve patient" is being helped back to a normal condition through indoor and outdoor industries.

Here at Clifton Springs we have a peculiarly broad and interesting field for work. Our industrial department has just completed the first year of its history, a year in which we have been studying possibilities with an almost bewildering result, so many are the doors of usefulness which might be opened. Other institutions are dealing with single problems—those of a hospital, of a sanatorium, of a special type of patient, etc. Here we are dealing with a complex problem, for Clifton Springs Sanitarium is itself complex. One patient tells me she has found it a hospital, and its surgical department has meant the possibility of a lengthened life; another, that it has proved a "rest cure," in which slowly exhausted nerves have grown strong; a third, that the spirit of the place has brought peace; and others, that they have learned how to live and are going back to old duties with fresh enthusiasm.

The unusual combination of patient and well person gives the Clifton Springs Sanitarium a unique character and creates broad possibilities of usefulness. In our industrial rooms it is difficult to remember who is patient and who is the father, mother, sister, brother, or friend of a patient. A young girl convalescing from an operation quietly carves leather in a window corner during the early afternoon hour when the room is not crowded. A man in the opposite corner is making his own design for a leather case. He tells me later that this designing has been his needed proof of recovered nervous strength, for it was work demanding close concentration that caused his condition of nervous exhaustion. Later the room is filled with people who are staying in the sanatorium in order to be near invalids whom they have brought here for treatment. At such times it is interesting to watch the conversation as it drifts from literature to travel, or to a discussion of new possibilities of some of our crafts. It is an atmosphere of health, and the patient forgets his especial "Achilles heel" in wider interests.

We have stumbled upon a simple way of making what we call "water color designs" from cretonnes. The technic is so simple that a beginner can easily follow those designs already worked out, and after a little experimenting can create similar ones, combining her own choice of colors. This method of weaving designs in rugs has proved a fortunate discovery, partly because many of our pupils are too ill to make the more exacting "embroidery" or "overlaid" designs of many modern rugs, or are spending so brief a time at the sanatorium that they cannot undertake finer linen or silk weaving, such as we offer more advanced pupils. Here at one loom a patient of the sanatorium is weaving rugs for her own home, at the next loom a woman is doing this work in order to help reduce her weight, while at a small handloom a patient who is unable to use her feet is weaving a finer texture.

Bed patients and wheel-chair patients weave tapestry baskets. This, the least of our crafts, is the one which most frequently brings far-reaching results. These special pupils are usually patients who are spending several weeks, often months, in the sanatorium. Many are post-operative cases, some are nerve cases, and some are having protracted corrective treatment. While this simple craft may meet the need of a new, diverting occupation, it at the same time meets a greater need in the bringing to the bed patient an acquaintance who comes daily at an appointed time with a legit-

imate reason. There is no feeling on the patient's part that she is "being done good to," for this visitor comes simply as a teacher. Sometimes the relation remains merely that of teacher and pupil, but more often I find proof, as I look back over the history of these cases, that an acquaintanceship has grown into a friendship. It is from letters which come to us from such patients after they have left the sanatorium that we learn most of our failures and successes in comradeship.

We are all "children of a larger growth," and, after all, reeducation is simply child training in a new form. Must we not meet each patient as an individual and with a thoughtful consideration of the developing forces of life, in order that we may lead her to an understanding of herself and the equipping of herself for taking up life afresh? As people talk with me of past experiences and look forward into the years to come, I find that I ask myself certain questions, which may be classified in some such form as this:

I. The patient's past.
  1. Why did she choose her special vocation?
    (A) Inclination?
    (B) Force of circumstances?
  2. Why did she prove unequal to this work?
    (A) Did the strain come from the nature of the work itself?
    (B) Did the strain come from outside causes?
      (a) Hygiene conditions?
      (b) Environment?
      (c) Outside demands on her strength?
    (C) Was the patient fitted for this special vocation?
      (a) Lack of training?
      (b) Temperament?

II. The patient's present (during illness).
  1. Antipathy to old work?
    (A) Because unsuited to this vocation?
    (B) Because the actual conditions are exaggerated in the patient's mind through memory of the effort necessary to carry on that work when physically unequal to the task.
  2. A realization of the fact that the former reasons for choosing this work may again make it necessary.
  3. A dread of the old struggle.

III. The patient's present (during convalescence).
  1. The return of a vague interest in life.
  2. A wish to consider the future.
    (A) First, the desire to try a new field, feeling that anything new will be more possible than the old work.
    Second, with increased strength comes the natural facing of personal responsibilities and the question as to what extent they should be considered.
    Third, with the nearer approach of normal health comes the power of judging more fairly one's relation to life.
      (a) Governing influences—natural fitness; training; experience.
      (b) The relation of one's life to other lives.
      (c) Probable future physical condition.
    (B) In more advanced convalescence comes a rereturn of interest in old problems, combined with a realization of the value of experience in future usefulness.
    (C) Choice between returning to the old mode of life or taking up an entirely new life work.
      (a) How best to meet the old obligation.
      (b) Reeducation in the sense of technically fitting oneself for a new career.

In many institutions where industrial work has been introduced the patients belong to the laborious classes. The sick people and the well people who work together in our industrial rooms belong rather to the professional classes. These men and women are not interested in crude forms of work. The industries we offer them must be artistic, and it is frequently their own imagination and originality which inspire new creative efforts. To a limited extent we can give these people interesting occupation. We can guard them from working too strenuously and so often ward off discouragement, but it is to the special physician of each individual patient we must turn for needed information regarding that patient's physical condition. "Physician and social worker must do *team work* if they are to succeed."[2] Without a diagnosis of each case, the industrial teacher is in constant danger of doing harm rather than good. Work which one person may attempt without the slightest danger may be too exacting for the eyes of another. The weak points of each patient must be carefully kept in mind, and often the physician is the only competent judge of just the amount of work it is safe for a patient to attempt.

[2]Richard C. Cabot, M. D., "Social Service and the Art of Healing."

Work has been begun on the new building for the People's Hospital Company organized at Akron, Ohio, early in the summer. It will be a three-story and basement structure, with a capacity of 112 beds. The equipment will be modern in every particular. It is estimated that the cost will be about $128,000, comprising $18,000 for the site, $95,000 for the building, and $15,000 for equipment, the total outlay per bed being approximately $1,143. As stated before in these columns, it is not anticipated that any endowment or contribution of any kind will be required for the maintenance of the hospital, it being the belief of the promoters that it can be operated on a self-supporting basis.

The $75,000 sanitarium building which has for some time been in course of construction for Dr. W. R. Newton at Cameron, Tex., has been completed. On the base it is 157x84 feet. It is three stories high and of fireproof construction, balconies, galleries, and sleeping porches included. The building is heated by steam, controlled by thermostatic regulation. On the first floor are located the administrative offices, dining room, staff dining room, examination room and x-ray room. On the second floor are sixteen private rooms and two ward rooms of 10 beds each. In the third story, which covers only the central part of the structure, are ten private rooms, a solarium, a lecture room, and the surgical department. The floor of the operating room is of white tile and the walls of glazed white tile. Each private room is connected with bath. The institution will be conducted under the name of the Cameron Sanitarium and Training School for Nurses.

ARTIFICIAL ILLUMINATION IN HOSPITALS.[1]

Problems in Ophthalmology, Physiology, Psychology, and Architecture Enter Into Study of Illumination—Eye Strain Avoided by Proper Distribution and by Concealment of Direct Light Source—Distribution of Light at Ceiling by Indirect System Is Physiologically and Physically Proper.

By MEYER J. STURM, Architect, Chicago.

I APPROACH the subject of my paper, "Artificial Illumination in Hospitals," with some trepidation, inasmuch as in my experience of an architectural practice limited to hospitals I have found that there is a most disconcerting difference of opinion among those connected with hospital work as to what constitutes proper procedure in almost every branch of the construction and equipment of such buildings. This is all the more evident in such matters as pertain to the equipment, and under this heading I include the proper method of illumination—namely, the fixtures and apparatus necessary for this branch.

I am unalterably in favor of standardization, and I hope your committee in charge of that work will continue its good efforts along the lines it has been advocating and working. May I ask that we, the architects who are intrusted with the carrying out of your projects, be given a voice in your councils, and, in helping you, help ourselves to be of greater assistance.

My subject is presented to you with the thought in mind that it will be a basis at least for one standard procedure. So far as possible, I have standardized in my profession all specifications and drawings for equipment in plumbing and electric work, sterilizers, kitchen equipment, and the general equipment of hospitals, but I seem not to have been able to reach a definite conclusion on this standardization in the matter of illumination, simply because the methods of most architects, in working out the illumination problems for hospitals, have been somewhat haphazard, and, secondly, because the subject of illumination is comparatively new so far as the physiological and psychological effects of such illumination are concerned. I wish to present the subject, therefore, in such manner and form that you will be able to draw definite conclusions and be prepared to adopt such standards as will apply to your particular problems.

The subject has so many points from which it could be discussed, that it is hardly possible to go into them all this evening, inasmuch as it would take volumes to give you all that has been written and advanced relative to the subject of illumination. What I am attempting to bring especially to you, however, is a clear and concise compromise between the abstract and the concrete in the subject, as applied particularly to hospitals.

It will be necessary to give to you some of the technical data on this subject and then to give you the practical application of this data. The field of the illumination specialists has changed considerably in the last few years. Formerly we knew only the terms of illumination in candle-power. Now we study illumination not only from the point of intensity of such illumination, but from the physiological as well as the psychological effects.

I wish to call your attention to the fact that illumination intensity measurements are entirely inadequate to determine the effect of any given illumination system on the retina. From an electrical engineering standpoint there is a well-defined field. Physical science and mathematics, both pure and applied, must also be brought to bear. The illuminating engineer must, however, know besides these, and highly specialize in, ophthalmology, physiology, psychology, and architecture, and, as one author very concisely expresses it, "he must be familiar with all phenomena of light production and its application, from the coal pile to the human brain."

A few words will be necessary, therefore, on the physiology of the eye from the viewpoint of the illuminating engineer. As is well known to you, the eye is not only an extremely complicated instrument, a camera obscura, best expressed by Dr. Turner when he states that "its recipient, recording element is a living tissue, so wonderfully and delicately specialized that the untiring efforts of our most highly developed physicists and physiologists, applied assiduously over a period of many years, have hardly sufficed to secure even the most superficial knowledge of the obscure processes whereby the vibrations of radiant energy, passing through the transparent refracting media and falling upon the retina, are converted into such form of energy as is capable of producing in the cerebral centers the physiological phenomenon known as vision, with its variations as to light and darkness, color and luster."

As is well known, light is not a physical quantity, but is the physiological effect produced in the cerebral centers by a nerve stimulus. Physiologically, therefore, we have only to consider the significance of brightness—not only the intrinsic brightness of light sources, but all subjects in the

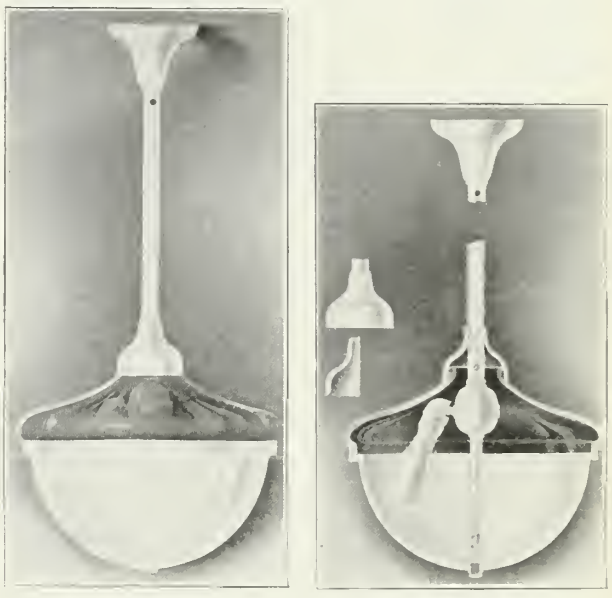
[1] Paper read at the sixteenth annual convention of the American Hospital Association, St. Paul, August 25-28, 1914.

field of view—and it is the illuminating engineer's field "to produce in the field of view a distribution of brightness possessing certain desirable characteristics."

Haphazard methods cannot be employed, inasmuch as the mere attaining of a certain illumination does not indicate that one has a desirable brightness distribution; nor, as a matter of fact, can any installation for the purpose of illumination be described in terms of illumination. Dr.

Fig. 1. Operating room light, designed not to cast any shadows on the operating field.

Ives gives as a definition of brightness that "every visible surface is giving out light." In other words, it is a light source of definite and measureable candle-power; it has area, which too is measurable. To measure the candle-power per unit of area thus becomes a definite physical problem. This quantity, expressed in consistent units, such as candle-power-per-square-centimeter, is defined as the brightness of the surface. Perhaps the most striking characteristic of brightness, as distinguished from illumination, is that it does not change with the distance between the bright surface (real or virtual) and the observer. A bright surface is equally bright whether one views it from 1, 10, or 50 meters. This follows from the definition; for brightness is a physical characteristic of the light-giving surface, and not of the observer's eye or position. The meaning of this, with respect to the eye, is important. The light flux entering the eye from any small surface varies inversely as the square of the distance from the surface to the eye. But likewise the solid angle subtended by the surface varies inversely as the square of the distance. Consequently the flux per unit area of the image upon the retina remains the same; in other words, the brightness of that image is constant. Remember that the eye is a camera, and it follows immediately that a measurement of the brightness of surfaces in the



A. B.

Fig. 2. Special lighting fixture for hospital—A, exterior view; B, sectional view.

field of view is also a measure of the relative brightness of the corresponding parts of the image on the retina.

As a consequence of this attribute of brightness, it may be measured from any position. While, for instance, an ordinary photometer placed in the center of a room can measure only the illumination at that point, a brightness measuring instrument can from that location survey the whole visible room, walls, floor, and furniture. Perhaps the most accurate commonly understandable analogy to illumination and brightness measurements is furnished by the photographic camera. Let it first be used in the ordinary manner to take a picture of the room. This corre-

sponds to the measurement of brightness. Let it then have its lens covered by an opal glass. Now all it can distinguish is the sum total of the light coming in a given direction. This corresponds to an illumination measurement. The scene presented to the camera may contain bright windows or lights, which cause local halation, and dark shadows which will fail to show detail; or, on the other hand, it may be a uniform white sheet. With the lens working, the radically different character of the two scenes would show on the picture. With the opal glass the blackening of the

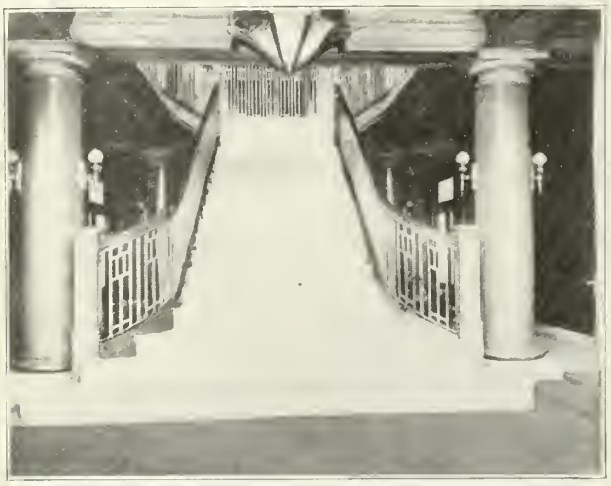


Fig. 3. An example of how modern lighting may be applied in both a practical and an artistic manner.

sensitive plate might be the same for each. So illumination measurements may give a totally inadequate description of what the eye must endure.

It is not necessary for me to go into the manner of the measurement of brightness, but this can be done scientifically and clearly. It must be taken into consideration, however, that what the eye sees is not illumination, but, more precisely, the distribution of the brightness in the field of vision. In other words, illumination is merely the method of producing brightness distribution, and it is the field of the illuminating engineer to analyze the best methods of the arrangement of brightness in this visual field that are pleasant or safe. Such measurements, properly made, make the entire field of what the eye actually sees. This might be illustrated as follows: considering the two extremes of black and white walls in a room, these walls may in either case receive the same illumination, but it is obvious that the eye or the retina could not properly receive the same stimulation from the black surfaces that it would from looking at the white.

Consider also a room illuminated by overhead exposed light sources. Let the observer, without changing his position, place and remove an eyeshade. While the "working plane" illumination remains constant, his visual field is quite revolutionized from the standpoint of comfort. A plot of the brightness distribution in each case is again a true index of the physical cause of the different effect on the observer. A similar case is presented where overhead lights are raised several feet. The illumination may be lowered, but the visual field is freed from its most glaring features. Consider an observer facing a large area, moderately bright surface, such as a ground-glass window. Next let the window be replaced by a black surface, in the center of which is a point source of light of the same candle-power as the whole white surface. Now, although the same amount of light enters the eye—i. e., the illumination at the point where the eye is located is identical—the distribution of brightness is radically different, as is the visual effect from the standpoint of comfort. Remember also that light is a cause, illumination an effect, and that brightness, as stated, is a light source of definite and measurable candle-power given out by every visible surface, a definite, tangible constant.

In all probability the light source illuminating an object under observation must be concealed, no matter what its intrinsic brilliancy. Mr. Herbert Ives states relative to this that "if one considers a light source of lowest possible intrinsic brilliancy which can give a certain chosen illumination, it

Fig. 4. A modern lighting fixture installed in a private room, giving glareless illumination.

consists of an infinite plane, such as a uniformly cloudy sky." If one takes a perfectly plain white matt reflector and places it parallel to the infinite plane at any distance from it, the question arises, what is its intrinsic brightness, and the answer would be, the same as that of the plane. Take any reflecting surfaces, such as found on ordinary every-day objects; these will all be of lower reflecting power than the one just considered, and will consequently be less bright than the light

source. Since all other light sources giving the same illumination will be brighter than this infinite plane, it follows at once that, in order for any illuminated object to be less bright than the light source, the latter must be concealed. By this is not meant merely the concealment of the original light-emitting unit, such as the mantle or the filament, but the concealment of that surface which really acts as the light source of the point or plane of interest. Thus the bright ceiling used with an indirect fixture is the true light source, inasmuch as by no entirely photometric device or measurement can any distinction be made between a diffusely reflecting ceiling, a diffusely transmitting ceiling, or an incandescent glowing ceiling—surface brightness, directional value, shadows, everything is the same.

A bright ceiling is just as much a light source to be concealed as is a filament, although the discomfort from looking at a bright ceiling is far less than looking at a filament. The ceiling has a great advantage of soft shadows, but still it is always brighter than the object it illuminates. By concealment I do not necessarily mean complete concealment, but only such a degree of obscuring as will decrease the brightness of the light unit, as seen, to a point below that of the object it illuminates. That is, the illuminant need not necessarily be furnished with an opaque metal "beehive" reflector; the reflector may be translucent, but of a very low transmission. Here, then, we have the best argument in favor of indirect light, either wholly indirect or so-called semi-indirect.

Let me call your attention here to the fact that one of the many reasons for the growing popularity of indirect lighting is the absence of sharp shadows and the reduction of glare. Inasmuch as tranquillity of mind is one of the first requisites for a patient in a hospital, the elimination of all disturbing elements is to be sought for, and the sharp shadows and the reduction of glare are two of these disturbances which are eliminated by indirect light.

It has been aptly stated by one of our well-known surgeons that lighting fixtures in hospitals up to the present time seem to have been designed for the sole purpose of destroying eyesight, and this despite the fact that, if there is any time at which a person's eyes are more liable to be injured than any other time, it is when the general condition of the patient is below the normal—namely, when he is suffering from some ailment affecting his general condition and consequently his nervous condition.

Up to the present time it might well be said that the method of illumination of most hospitals gives rise to these very conditions. The direct light to which the eye is exposed has the effect of causing the eye to attempt its own protection. On the other hand, attempting to use the eye has precisely the opposite physiological effect; in other words, on the one hand you have a spasmodic contraction of the iris trying to shut out the light which is tormenting the eye, while, on the other hand, you have the physiological tendency of expanding the retina for the purpose of being able to see something, and the only conclusion which can be drawn from this is that we have had the worst possible conditions for the eye at a time when the eye is not in the best condition to protect itself.

Inasmuch as my subject is artificial illumination, I can only mention the fact that most of our large wards with windows on both sides and the beds facing the windows are an extremely good example of this destructive method of daylight illumination. I see no reason why the hospital should not be an educational institution for the patient and the patient's family, as well as for the nurses, inasmuch as everybody has someone in the hospital at some time. If the hospital leads the way in the use of reasonable lighting, it would take but a few years before our homes are so illuminated that the conservation of sight will be easily attained.

The planning and construction of a hospital today, as compared to that of twenty years ago, has well been stated as the difference between the stage coach and the flying machine. We are at the present time at a point at which two very important elements are creeping into hospital construction. One of these is efficiency—namely, that everything in the hospital, pertaining to the hospital, and of the hospital is for the one purpose of doing things; the second is that there are more and more patients in every community who are being treated in institutions, which institutions cannot live unless you have efficiency and economy combined. I wish I might digress at length on this subject of efficiency and economy, especially on the latter, but time will not permit. I hope at some future date I will have the opportunity to present this subject to you.

The matter of calculations for the working-out of the necessary light intensity, brightness, and sources for a hospital is simple. I shall make no attempt whatever to give you such calculation in foot-candle intensity, but to give to you such figures as are used ordinarily and which are as simple as possible. Take the square-foot area of the space to be illuminated and calculate $\frac{3}{4}$ to 1 watt per square foot of foot area, depending on the room or ward in which the illumination is to be placed. This will give you practically 2 to $2\frac{1}{2}$ foot-candles at the height of the bed, and this is all you need to know about foot-candles. This is for indirect illumination.

In such rooms as need direct illumination I follow the same method, inasmuch as with an intensity of 1 to 1¼ watts on the same basis on the same number of square feet of floor area of a room the increased illumination by prismatic reflectors will bring this foot-candle intensity up to proper intensity for working light, inasmuch as in these departments light, instead of illumination, is required.

If you assume any direct light as 100, then with 1.3 watts per square foot figured for indirect lighting, by assuming indirect lighting one-half as efficient as direct light for the same wattage, we have 2.3 watts per square foot when a direct light is used, giving an intensity of 4.5 foot-candles for all such departments as are required to have direct light, with the exception of the operating department. This is considered good working light at table height, at which height there would be practically 5 foot-candles per square foot. Necessarily for operating rooms, if one is to use indirect lighting—and this is coming in vogue more every day—the watts per square foot would have to be considerably higher than for any other portion of the hospital. This intensity can readily be obtained with smaller units than originally, inasmuch as the new large wattage lamps, from 500 watts up, known as the tungsten nitrogen lamps, will give three to four times the light, compared with lamps of the same rating without the nitrogen feature. Unfortunately, such nitrogen lamps are not made in small wattage lamps. I wish to state, however, that the foreign lamps are made from 100 watts up, but these are not standardized as to size, and some of them may run large and some small, so that no standard reflectors could be used unless the same size lamp was used in every instance. Extreme care should be exercised in the use of these lamps, inasmuch as the filament in relation to the reflector must be in exact location, and all reflectors must be designed for this particular lamp. If this is not carefully considered, either when used as a direct or indirect light, there is liable to be a dark area, surrounded by an intensely bright ring. Such lamps should not be used on the ordinary translucent bowls where these are used for reflectors on indirect lighting, inasmuch as the intensity of this light makes the bowl so bright as to be disturbing to the eye.

Applying these principles, and taking as an example the ordinary hospital, we have then to consider the best method of illumination for the different departments. For the purpose of this paper, will say that the working department consists of kitchens, toilet rooms, service rooms, store rooms, corridors, and the like; that the patient department consists of the general offices, wards and rooms, and that the operating department consists of the operating rooms and their accessory rooms. Then the working department should have direct light concealed by either prismatic globe or beehive reflectors of the metal type, these reflectors to be of larger wattage than the lamps over which they are placed in order to conceal the filament as far as possible. Such lights should be placed as near the ceiling as possible, with concentrating reflectors which would give a good distribution over the entire room, inasmuch as in such a department, with the lights installed high and equipped with large reflectors, the light would not be thrown directly into the eye, and this would be the much more economical method. In the patients' department the indirect or semi-indirect light should be used for the reasons given herein. In the operating department, with the new lamps, the indirect system is admirable, or some system to take its place wherein the same effect is obtained practically, with greater intensity, directly on the field of operation by cross illumination, as will be shown to you in the illustrations.

In addition to the ordinary illumination, there should be the supplying of plugs or outlets in all of these departments for illuminating or lighting purposes; necessarily, in addition to such plugs, there should be the plug outlets for apparatus. In each room or ward, at the head of each bed, there should be a plug, so that a reading lamp or exploratory lamp could be used at each bed. I advocate the plug in preference to the light over the bed, inasmuch as the light over the bed cannot be properly placed so that it will be in the right position for the bed, and also because it cannot be applied closely, and the most potent reason that the light from the lamp is directly in the eyes of the patient when the latter is lying down.

Briefly, I will take up the matter of color, as this is of vital importance in considering this subject of artificial illumination. In the working department the light tan walls and the straw-colored ceilings are to be recommended. For the rooms and wards the blue-greens or grass-greens for walls are very good. The ceilings in every instance should be of the straw color in order to get the soft diffusion of the light. Keep in mind that in any indirect lighting system—or, for that matter, in *any* lighting system—only the color is reflected which prevails upon the illuminating surface. The subject of colors for the walls and ceilings in the operating rooms is one which is now being discussed quite at length. In the last few years I have advocated, and used with extraordinary success, floors of red tile in the operating rooms. Many surgeons are now advocating the use of the light-green tints for the walls and having the ceiling of straw color. This is very restful

to the eye and has every advantage of being as clean as the pure white, and has none of the disconcerting features of the white glare. The wainscots of such rooms can now be obtained in the green tile or green glass, and the walls above such a wainscot can be painted in the green to match. I noted recently in one of the magazines that in some of the hospitals the doctors are even wearing green gowns instead of the former white gowns.

It is necessary, therefore, to give to you some data as to the method of installation of lighting systems. In the working department all lights should be controlled by a single push-button wall switch, unless it is desired to turn these lights on in units, in which case the method followed in the room lighting is advocated. I will show you an illustration of what is commonly known as a two-point and three-point electrolier switch. You will note in this illustration that in the two-point electrolier switch the connection is made so that the first turn or push of the button will turn on one light. This to be of small wattage and used as a night light. The second turn will turn on both lights in the fixture. The third turn will again turn on the first light, and the fourth turn will turn off all the lights.

In the three-point electrolier connection there will be three lights in the fixture. The first turn will turn on the first light, which will again be the small night light. The second turn will turn on lights No. 1 and No. 2. The third turn will turn on all three lights, and the fourth turn will turn off all the lights. This gives a nice selection of the quantity of illumination, depending on the purpose for which the light is to be used.

Keep in mind at all times that there are plugs at the head of the bed to which exploratory lamps for close work or for reading can be applied. In the case of the operating room, if there are a multiplicity of lights to be turned on, or if in long corridors such lights are to be turned on, it might be well to have them arranged so they could be operated by what is known as remote control switch. This is controlled by what is known as a momentary contact switch—namely, a switch which needs only a momentary push to operate the control and thus turn on all the lights in the circuit. The operation of this switch can also be controlled by a foot control switch, which the operator has under the operating table, when the lights can be thrown on as quickly as need be. Where the lights are to be controlled in all the corridors from one central point, a bank of buttons, as shown in the illustration, can be put in the office with these momentary contact switches, connected up to the remote control switches, which would control, let us say, for example, the central wing, east wing, the first ward, second ward, etc.

THE PRESENTATION OF THEORETICAL WORK TO STUDENT NURSES.[1]

Definite Courses of Study Should Be Presented in Logical Order and Accompanied by Practical Work—Ethics and Etiquette of Professional Life Highly Important—Hygiene, Sanitation, Materia Medica, and Diets Should Be Taught in Elementary Way—Bacteriology Sufficient to Show Sources of Infections and Principles of Disinfection.

By MARY C. WHEELER, R. N.,
SUPERINTENDENT ILLINOIS TRAINING SCHOOL, CHICAGO.

THE young women who are applying to schools of nursing are, in many instances, women who have been earning their own living. Their application is a result of a desire for a broader occupation or for the fulfillment of their cherished ideals. In either instance they have been balancing the profession of nursing with other occupations. After graduation they realize that they have not only received a nurse's education at a small expense to themselves, but also that their income is greater than it otherwise would have been.

The applicants are examining the various schools; considering their respective reputations, teachers, curricula, and home accommodations. A school must be able not only to present to students a definite nursing curriculum, but also to associate this theoretical teaching with definite practical work. The practical drill develops efficiency, poise, patience, and a response to discipline as is seldom gained in any other way.

The theoretical subjects should be presented in a logical order and in accompaniment with the practical work. What topics are to be taught will depend, in large part, on the number of departments for practical work, on how much material there is to be presented in each department, and in which year this particular piece of work is to be accomplished. Each school must be its own judge on this matter of curriculum, and nothing more than minimum requirements can be de-

[1]Paper read before the sixteenth conference of the American Hospital Association, St. Paul, August 25-28, 1914.

manded by any foreign body. The value of the school to the student, the number and qualifications of the students applying, depend on the true value of the nursing education presented.

The preliminary course should act as an introduction to nursing, in the first six weeks of which should be given such talks as will show the students their place in the hospital life, as, for instance, their relation to the board of managers, the attending staff of doctors, the community, the other nurses, and all members of the household. This is also a fitting time to go over and explain the rules of the institution, and the ethics and etiquette required in professional life. During this time the teaching of such elementary nursing technic may be given as any woman might be able to use in her own home, all of which should be under close supervision. The student is also being examined for her fitness to be retained in the student body. Should she fail to qualify at the end of these six weeks, then is the time to decline her further residence in the school.

In the second six weeks such other nursing procedures may be presented as will begin to fit her for night duty as junior in her sixth month. She also devotes more time to general duty and is supervised a little less closely.

Besides the instruction in nursing and nursing ethics, the student should be given some instruction in elementary hygiene and sanitation, elementary materia medica, and hospital diets. Some chemistry is a necessity to lead her to see the intimate relation of chemistry to every-day life. Elementary bacteriology shows the sources and modes of infections and the principles of disinfection.

The theory to be presented after the three months' preliminary course requires careful outlining in order to give each presented topic its proper weight in the curriculum. The number of classes, lectures, and demonstrations on each topic, the time and required relief from duty, together with the instructor, must all receive adequate consideration.

The lesson should be assigned by topic, an outline of it should be given as a framework for the student, and the reading material selected for her so that no time is lost in looking for the same. All materials possible to demonstrate any part of the lesson should be used. After the theory has been given, followed by demonstrations, and the relation between the two made clear, the student may be asked to make her own observations in the ward during the following week, and bring back her observations to the class for discussion. Following this discussion, another demonstration, given by the students themselves, fixes many points for them which were not clear. Students should understand that they may be called on to demonstrate to other groups of persons—such as attendants, orderlies, head nurses, etc.—at unexpected times.

The students should be required to report for all classes and lecture work, except those from which they are excused by the proper authority. Demerits for tardiness and inattention should be given. Recitation and examination marks are a part of the history of the student. One successful plan is that she receives credit for thorough work by an excuse from final examination in the subjects in which she has made a grade of 85 percent. She is not allowed to take the examination unless she makes at least a 70-percent grade. Being unable to make 70 percent, she is not retained in the school unless she can make up the study before the next term. Final reports for the year are given the student, together with her efficiency mark in her practical work. All records should be filed for future reference.

One person should be in charge of all of the theoretical work, and should not attempt to cover all of the topics in the curriculum. Others who can give the time to the instruction in special subjects should be secured. Outlines of the work to be presented should be submitted by them to the head of this department, so that she may know if the work to be presented covers the subject sufficiently or goes into it too minutely. To meet the needs of the person in charge of the theoretical work, her teaching department must be adequately equipped, including class, lecture, and demonstration rooms.

Student nurses are no different from any other body of students in that they appreciate instructors with good personality, a thorough knowledge of the subject, which they should be able to impart, and they should be interested in their students as individuals. Lecturers should be selected for the same reasons as given for the selection of teachers.

The follow-up work in the wards is of great value in that faults in technic are corrected before they become established habits. The mere fact that the work is examined, corrected when necessary, and appreciated when well done, inspires better work, keeps the interest of the student alive, and tends to make her what she should be—observant, thoughtful, and an upright woman with an aim in life.

The successful school of nursing, then, proposes a definite curriculum of nursing topics, presents this curriculum in an interesting manner, associates it with practical work, makes definite requirements for entrance into the school and in the class room, maintains a grading system, and keeps necessary records for reference.

The successful school of nursing selects teachers for their knowledge of the subject, their ability to impart this knowledge, and the interest they take in the development of the woman and her education. Such a school also provides a follow-up system on the work of the student by grading her efficiency.

What are the results? The patients in the hospital show that they are well cared for, and there is an atmosphere of contentment among them, while the surroundings show thrift in time, effort, and materials. This general atmosphere is much appreciated by the wise medical man, who, in turn, assists to enforce these very conditions. The nurse has developed poise, consideration, and thought for others, and an ability to meet emergencies successfully.

A spirit of harmony should exist in the student body, and this harmony of purpose will exist when the course of study, both in theory and practice, has been properly presented, when the student body sees the justice of the administration and can approve the living conditions. When these conditions are fulfilled in nursing education, then the nurse will be of more value to the community, and, in return, the community will be glad to respond to the constant demand of the school for suitable material to develop.

ITEMS IN HOSPITAL EFFICIENCY—NURSING OF PATIENTS.[1]

The Doctor Treats the Disease—Nurse Should Care For Patient—Duties Not Complicated —Obedience of Orders First Rule—Small Hospital Better than Large for Nursing Care.

By JOHN A. HORNSBY, M. D.

IN this paper it is not intended to discuss nursing politics, or nursing ethics, or the morals of nursing, or the education of nurses, but to present a few thoughts concerning the nursing care of patients in the average modern hospital, under the average working conditions in those institutions, hampered, as many of them are, by scarcity of funds, and still more greatly hampered, as all of them are, by a scarcity of material for nurses.

Only the other day Dr. Walter L. Bierring, of the University of Iowa Medical School, in a paper read before the hospital section of the American Medical Association at Atlantic City, gave a happy definition of the relations between the patient, the doctor, and the nurse in these brief words: "The physician should treat the disease; the nurse should care for the patient." This seems to sum up almost the whole story. The doctor should have to do with the disease, should treat it, and should give all the orders for his patient to that end; the nurse, on the other hand, should take care of the patient according to the orders of the doctor.

Let us for a moment go through the various services of a general hospital and see what the nurse has to do, and what she should know in order to do it.

Let us take, first, the most important, or at least the most exacting, service—surgery. In the surgical service, under the direction of a trained superior, the nurse must prepare material to be used in the operating rooms and in the dressing rooms about the institution. The preparation of these materials is according to the formulas usually printed for each hospital, and not a great deal of training in this respect is required. The making up of packages for the drums and of combinations for the floors is not a serious matter, and requires only attention to business, so that the counts shall be right. But after the materials are all prepared they must be sterilized, and this is a technical operation for which the nurse should not be held accountable. How can she possibly know whether the temperature control on the sterilizers is correct? That is something for the engineer and for the superintendent of the hospital. The nurse must know by thumb rule how to turn the valve to bring about a certain reading on the dials, and by the same thumb rule she must know how long to keep up the process. These are not difficult duties, and do not require a great deal of training.

But there are duties in the surgical operating rooms that do require training, and the training to be had there is the same that must be employed in every other part of the hospital; so much so that it has sometimes been urged by hospital superintendents that the nurse should receive her first training in the surgical rooms. The objection to this is that the nurse should not be called on for the most arduous and technical and exacting duties until she has been in the institution long enough to become oriented and accustomed to the exciting incidents that she will meet there.

The surgical operating rooms have constantly to do with surgical cleanliness, and, once the nurse has learned how to make supplies and to act as "supe," she must begin her real training in the aseptic care of everything she touches. It naturally follows that the pupil nurse at this time

[1]This is the fifth of a series of eight papers on hospital efficiency. Last month, "Hospital Diet;" next month, "Hygiene and Sanitation."

must know what asepsis is, but it would seem that this does not necessarily mean that she should know the life history, microscopic appearance, and pathogenesis of every organism to which at some time she may be introduced; but she ought to know enough about microorganisms to know that, if she comes in contact with fluids of any kind containing them she will be infected, and she should know also what chemical and physical agents are required to destroy these microorganisms. What difference does it make to her whether it is a streptococcus or a staphylococcus? For her purposes these microorganisms are practically the same. It would seem that she ought to know that there are two kinds of microorganisms —the spore-former and the nonspore-former. It is unnecessary that she should know which are pathogenic, because pathologists do not know that since a nonpathogenic microorganism may easily become pathogenic if planted in another field. She should know something about the spore-formers, because they require a much higher temperature, longer sustained, to destroy them; but even this knowledge is not quite so vital, because in the final analysis we do not sterilize against spore-formers, except in the matter of catgut, which, from its nature, is very likely to contain spore-formers, and is the only material used in the operating room that is likely to contain them.

The best way to teach nurses the little bacteriology it is necessary for them to know is for the teacher to take them to the operating rooms and illustrate the subject by having them clean their hands to a point of perfect sterility, take an impression on the slide from the sterile finger, and show them that there is nothing there; then have them put a sterile finger into their own mouths or on the floor and make another slide showing them that the finger is now infected. This is the best possible lesson to teach them the various modes of infection.

Then, they should be taught the various agents necessary to destroy these microorganisms, and almost invariably what will destroy one will destroy any of the nonspore-forming organisms.

With this information the pupil nurse should be able to unpack drums during the operation and hand sponges; she has learned to "supe" and to count sponges long before this. With this information, also, she should be able to take her part in the preparation of the patient; it seems almost unnecessary that pupil nurses should ever be called on to shave a patient. This service can be much better performed both for male and female patients by the intern or assistant surgeon who has charge of the preparation. Nurses do not shave well as a rule; they use poorly sharpened razors, and they abrade the skin, especially about the female perineum and in places difficult to reach.

The rest of the duty of the nurse in the operating room is to learn the tray lists, and these lists she can learn from the printed forms in use in the hospital. The office of instrument nurse, when a nurse is employed for the purpose rather than an intern, requires only that the nurse shall know the instruments by name and that she shall retain her presence of mind under all circumstances, so that she can thread needles carefully. Her efficiency will be all the greater, of course, after she has learned to follow the surgeon sufficiently to know what instruments are needed in the next step, but this does not require technical training, nor does it require book education, and is only a matter of experience "on the job." It is in this office of instrument nurse that many excellent nurses are ruined past all cure, especially if the surgeons are impatient and discourteous. A nurse can be so frightened while trying to serve in this capacity that she will not only lose her presence of mind, but her self-confidence may depart, never to return. We hear it frequently said of a pupil nurse that she will never make a surgical nurse. Generally the reason for this is that the girl has not sufficient poise to retain her presence of mind under the exacting conditions of surgical service. Another reason why girls sometimes fail as surgical nurses is they are not honest, but the same girl will fail in any other department of the hospital, because she is the girl who will record a temperature not taken, or a dose of medicine not given. This girl in the surgical rooms will turn off the steam from the sterilizer before the time is up, or she will omit one or more of the fractional sterilizations of solutions.

In the Surgical Ward.—The care of surgical patients after they have returned from the operating room is the next most technical duty that a nurse has to perform. She must understand what surgical operation was performed on the patient. She should know what tissues were involved, so that she can prevent injury at the site of the wound, and prevent patients from attempting to move muscles or tissues that have been cut. She must know thoroughly the various boxes that are used for the performance of the minor surgical procedures in the wards, such as those used for administration of salt solutions, venesection, spinal puncture, and the administration of vaccines and serums, and she must know the morgue box and the use of its various contents. Her orders from the assistant or the surgeon or the head nurse will tell her what can be done for the patient and what must not be done. The rest of surgical nursing is a matter of common sense and experience.

In the Obstetrical Service.—Obstetrical work, from the nurse's standpoint, is very much like the surgical. She will learn by experience and drilling at the bedside how to hear heart sounds and how to aid the patient in delivery. Her asepsis will be the same; the preparation of the patient practically is the same as for vaginal surgery; the preparation of materials and solutions is the same. She has the additional duty in this department of learning to care for the infant and for the postpartum woman, the bathing of the baby, the cleansing of the mother, the care of the cord. These are readily learned by practice and by attention to the rules of the department. The rest of her service in this department, like other parts of the hospital, is a matter of common sense and mother wit, neither of which can be acquired by any amount of training.

In the Children's Department.—While there are special needs of children and special methods of care, most of which the pupil nurse will have obtained before she arrives in that service, the pupil will have to learn in this department about infant feeding, the preparation of milk formulas, the principles of pasteurization and sterilization. Thirty days, a few hours each day, in the milk laboratories, working under a trained director and in accordance with simple rules, will teach her more than all the books ever written on the subject.

In the General Wards.—To perform correctly the duty of a medicine nurse requires more book study and more preliminary education than any other service in the hospital. The medicine nurse must know dosage, especially of twenty-five or fifty commonly employed medicines, including the alkaloids. It has always seemed a wonder to me that I have never seen a dose book or a work on pharmacy at a medicine case in any hospital. The nurse must always know the dose, the physical characters, and properties of her medicines, or she must guess at them; and yet there is no medical man who attempts to retain a knowledge of the dosage of medicines, except the few he is in the habit of using. Why cannot the pupil nurse be accorded the same privilege of referring to one of the numerous and accurate dose books when an occasion requires? The medicine nurse must also know the tables of weights and measures, and she should know the decimal system as well as the apothecary's tables. These things she must learn from books, of course.

In the Infectious Wards.—Nearly all infectious departments are now conducted according to rules in force in individual hospitals. We have learned so much that is new recently about the care of infectious diseases, and the sources of these infections, that the practice in this department has not yet been standardized, but, after all, it is purely a question of surgical cleanliness. The pupil nurse should know that every one of these infections is caused by a microorganism, some of them as yet unidentified and unsegregated. She must know that the chief sources of infection are the discharges, and that these must be handled with gloves and destroyed. She must know that the skin and hands and body generally of the patient are probably infected, and she must know how to observe her surgical technic in the handling of an infected body, not only to prevent infection of herself, but to prevent the carrying of it to other patients and to outsiders.

Adjunct Services.—About the only other service that the pupil nurse will have that requires a technical knowledge is in the department of dietetics, and the amount she learns will depend entirely on the hospital in which she works. Some hospitals confine their training of nurses in dietetics to teaching them a little about ordinary foods and nothing of the chemistry of foods or the physiology of digestion. Such a paper as this cannot be expected to be of value in outlining the training of pupil nurses in a hospital that realizes what the scientific dietary stands for; suffice it to say that the feeding of patients from the main kitchen of the hospital under the direction either of a cook or of most floor head nurses has no value to the pupil nurse from the standpoint of hospital dietetics.

Physical Therapy.—Unfortunately we have not begun to train the pupil nurse in the employment of the various agencies of physical therapy. We must begin to do so soon, because the modern physician is using less medicine as medical science advances, and he is doing more for his patients by way of special feeding and physical therapy. Presently we shall have to begin giving our pupil nurses a regular service in whatever physical therapy department the hospital provides. The pupil nurse should know about hot packs, cold packs, continuous baths, the Nauheim, the douches and showers and salt rubs, and how to give these when they are ordered by a doctor. She should know sufficient of the principles of massage to be able to give bed treatment to a patient under a doctor's orders, although it is not intended that any nurse should exercise the functions of a finished masseuse. If she knows how to rub the pain of a neuralgia away, how to rub a joint that is rheumatic, how to knead a group of muscles, it will sometimes be a great help to her, especially in the home nursing of patients, and this training ought to be given at the hospital.

Laboratory Work of Nurses.—Some day, let us hope in the not far distant future, when nurses are divided into two classes—first, those trained

to a high technical degree and who have had a fine preliminary education, and, second, those who have been deprived of early advantages and merely learned the hospital methods of nursing patients—we shall have trained nurses in private practice and in out-patient service who can make urinalyses, take blood counts, take the blood pressure, and determine the hemoglobin. An occasional one of these private nurses will, of her own initiative, learn bacteriology, so that she can identify throat and vaginal cultures and smears. A good many physicians in the large cities, men who have large practices, have their own medical assistants, but a very much larger proportion are not so fortunately situated, and the nurse who can perform these laboratory offices for the physician will have increased her value tremendously.

CONCLUSION.—We have now briefly run over some of the items in the training of pupil nurses. To what extent may the modern physician, practicing in the modern hospital, call on pupil nurses for assistance in the care of his patient? This is coming to be a most momentous question, and it is one of the many reasons why it requires more nurses to take care of a given number of patients than was formerly the case. The modern physician is expecting more for his patient, because the modern science of medicine has taught him the value of more things that may be done. It is no uncommon thing for a surgeon to operate on several free-ward patients in the course of a morning, and leave enough orders for the day to occupy two or three nurses with each patient—irrigations of all kinds, hot and cold external applications, hypodermics, half-hour temperatures, changes of wet dressings, and the like.

The obstetrician in the hospital will almost invariably need two or even three pupil nurses for each delivery, and in the last hours will usually keep them all busy. This is accounted for by the necessity for asepsis during the examinations and during the progress of the case.

In the children's department the feeding of patients is requiring more nurses all the time, because we recognize the value of having the feedings at the correct temperature, and that sick children must not be hurried in their feedings. An infant should have at least fifteen minutes for each two-hour feeding, and we might add five or ten minutes more for the warming and preparation of the foods. Under such conditions one nurse cannot care for very many children when her other duties are considered.

If these duties mean anything, even in their simplest form, they mean that nearly every hospital in this country is short of nurses; but it is a very serious question whether this shortage is to be cured in the near future, and it certainly is not to be cured if the standard of admission of pupil nurses is to be raised to a point where there are not enough young women to go around.

Then, what is to be done? Obviously the duties of pupil nurses must be made simpler, less exacting, and less time consuming. Thus the matter is fairly presented to the medical profession. It is not an uncommon thing for medical men to give an order for their patients contemplating hours of time of one or more nurses, when the service is not really necessary. Medical men should exercise more care and more consideration in laying work on the pupil nurses in the hospitals, and they should also help to train these young women and help them in their work rather than find fault with them about its faulty performance. In nearly every training school there is a want of cooperation between the medical men and the training school, and especially is this true of interns. These young men seem to take special delight in ordering all sorts of petty attentions to patients that are time consuming, and neither of value nor comfort to the patient. It is impossible in a paper like this to point out specific unnecessary duties with which medical men burden their pupil nurses; but if this paper serves no other purpose than to call the attention of medical men to a necessity on their part to help cut down the work of the nurses in the hospital, it will have served a most useful purpose. And on this question of training, and cooperation, and help, between the medical men and the pupil nurses, just a word about the relative value of training in large and in small hospitals. It has been said by some that a nurse cannot be properly trained in a small hospital, and by others that she can be trained better in a small than in a large institution. Does it not seem that there are advantages both ways? In the small hospital, while there is not nearly so much material perhaps, the training of the nurse can be more nearly individual—there is of necessity a closer contact between the nurses and their teachers in the training school. In the larger hospital there is not only more material, but there are usually more and perhaps more specialized teachers—women who have been trained in the art of teaching, and medical men who have had larger experience in teaching than most of those in small institutions. So it may be very seriously doubted whether the large hospital has much advantage over the small in the matter of training of pupil nurses.

It is estimated that 15,000 persons visited the new $500,000 building of St. Elizabeth's Hospital at Covington, Ky., when it was opened for public inspection August 2. The structure is four stories high and covers an entire block. There are 270 beds for adults and 60 for children, besides forty single rooms. The equipment is new.

FEEDING THE HOSPITAL—INTRODUCTION.[1]

Conduct of Institution Commissary Means Close and Careful Buying as to Quantity, Quality, and Price; Proper Storage and Care, Methodical Distribution, Scientific Preparation, and Prompt and Attractive Service—Buying From the Jobber and the House With a "Pull"—Ideal Storage—Things That Will "Keep"—Definition of a Good Cook.

By MISS LULU GRAVES,

CHIEF DIETITIAN, LAKESIDE HOSPITAL, CLEVELAND; RECENTLY DIETITIAN COOK COUNTY HOSPITAL; FORMERLY HEAD DIETITIAN MICHAEL REESE HOSPITAL, CHICAGO.

FORMERLY it was a common custom among wholesale dealers to dispose of their less desirable products to institutions, and it was usually a safe procedure, as there was no one with authority who took either time or trouble to pass judgment on the food materials when delivered, or to see that they received the proper treatment after delivery.

This gave to the wholesale dealer the same opportunity to dispose of much of his stock that might otherwise mean a loss, as is given to the retail dealer by the family which orders the day's supplies by telephone or sends a child out to the store to do the purchasing.

I am glad to say, however, that in both homes and institutions which are being conducted on a truly business basis, with standards of efficiency and economy, these methods are no longer prevalent. As every person, sick or well, connected with an institution in any capacity must eat, it is a self-evident fact that the commissary department is one of the most important, and must be given the same intelligent thought that is given to any department of the whole organization.

The foundation of a well-ordered commissary department is judicious buying. Buying judiciously means not only buying food materials of a desirable quality, and which contain the proper nutritive values for the needs of the people to be fed, at a reasonable price, but also keeping qualities and storage facilities must be considered, as well as discounts offered for cash or prompt payment of bills.

As the keeping qualities depend so much on the storage facilities, the two cannot well be separated. In the majority of hospitals and other public institutions the store room is apt to be space in the basement which cannot be utilized for any other purpose, or which remains after all other rooms are provided. If there happens to be ventilation in this room, well and good; if not, it will do very well for a store room anyway—is the general decision. This in itself is very poor economy. We are all well aware that a dark, damp room is conducive to the growth of molds and other forms of microorganisms which may cause the rapid deterioration of fruits and vegetables, either fresh or dried, and also that it is very difficult to keep such a room free from vermin.

Fruits and vegetables should be kept in a room that is not only well ventilated, but through which currents of air of a fairly even temperature are passing. In one of our larger hospitals in the East some attention has been given to finding the best temperatures for storage. They have concluded that most vegetables keep best at a temperature of 42° F., but that potatoes are better kept at a temperature of 60° F., and sweet potatoes at 70° F. If proper conditions are not maintained in the store room, fruits and vegetables must be closely watched, and the overripe or defective be frequently sorted out, and thus through much handling is added one more cause for rapid decay, not to mention the extra labor involved.

Cereals are very difficult to keep in a warm room unless in sealed packages, and this makes them considerably more expensive. The prepared cereals, particularly, are apt to become "wormy," even in sealed packages, and others may become rancid. Flour will keep better in cloth than in barrels. Dried fruits, too, may become "wormy" or "musty." In fact, there are few, if any, staple articles which are commonly kept in the supply room which do not keep better in a clean, dry, well-lighted, well-ventilated room, even though they may not actually spoil elsewhere. Moreover, I think we are all inclined, and not without reason, to associate a dark, damp room with mice, roaches, and other vermin, so that naturally we dislike to associate our food materials with that kind of a place.

Besides temperature, ventilation, and light, another important feature of a store room is space. If the conditions are favorable for keeping supplies, it is of great advantage to be able to buy in large quantities; particularly is this true of apples, potatoes, and all vegetables that can be bought for a much lower price at the time they are being gathered and stored for use during winter.

If enough business is given to them to warrant their doing so, some of our larger firms will in-

[1]This is the first of a series of papers on the general subject of "Feeding the Hospital." Next month, "The Food."

form their buyers when the probable lowest price for the season on a particular article has been reached, or advise them as to when it is a propitious time to buy. This is known as "protecting" the customer. We are all of us apt to make mistakes at times, however, and occasionally it happens that the buyer is not protected, but at any rate he is on an equal footing with the merchant, and the odds are in his favor the greater number of times. On the other hand, giving orders to more than one firm creates a competition, and on the whole is a better plan, provided there be more than one firm available furnishing desirable products.

The lowest-priced article is not always the most economical purchase. For example, there is more economy in buying select apples at $5.00 per barrel than in buying an inferior quality at $4.00 or $4.25, which may, and probably do, contain enough wormy or decayed apples to make the price really equal that of the better grade, or in which the flavor of those that are "specked" may be so much less agreeable that they should be classed as inferior.

Buying from a jobber is like buying from a bargain counter. If one is familiar enough with the article to be sure of his own judgment, a very good bargain may often be found, but promiscuous buying from a jobber is apt to result in one finding that in the end the original saving has been counteracted by the loss in spoiled or inferior goods received from time to time. Again, buying in "job lots" is apt to lead one into buying, at times, more than is really needed; then, in trying to use up the extra quantity, too frequent repetitions of that one food leads to dissatisfaction among the people to be fed, and often to creating an antipathy for that particular food, making it difficult to use it at a later time. Even a more unsatisfactory thing than buying from a jobber is to have to buy from some one who has influence in the hospital—a trustee or a trustee's brother-in-law. In such a case, even the best buyer is utterly helpless, and after a few experiences will usually decide to take what is sent to the hospital from the favored house, and blindly O. K. the bills at the end of the month, with a feeling that she is bound and gagged and not strong enough to even struggle.

In some of the eastern markets the "unit system" is used. For instance, a specified number of barrels of sugar constitute one unit, and a certain percentage of discount is given on the unit; no further discount is given, no matter if one buys ten times that number of barrels. In these markets, of course, there is no advantage in buying more than one unit at a time, except it might be to save the trouble of more frequent ordering. With the limited facilities for storage in the average hospital, however, frequent ordering would be much less of a difficulty than caring for the larger quantity.

The demand for fresh fruits and vegetables in all seasons of the year makes it necessary for them to be grown in unnatural conditions, ripened artificially, and some of them transported long distances. Most of our food material in the cities is handled by many different people before it reaches the consumer. All of these things may affect its condition or its desirability, more or less, and mean much to the person who is ill or has an impaired appetite or digestion. Unripe fruits or vegetables have a large percent of starch in a state which makes it difficult of digestion. On the other hand, if overripe—because of the sugars and moisture they contain—they furnish a good medium for the growth of bacteria, which may form objectionable products.

Meats may be kept in very good condition for a reasonable length of time in cold storage, but if kept long at a higher temperature when taken into the retail market they deteriorate very rapidly. This is especially true of fish and poultry, and the same thing can be said of eggs.

Though a buyer knows all of these essential things about his institution, markets, and food materials, he is not yet completely equipped until he knows what can and what will happen to these food materials when cooked and served. The very best that the market affords may be purchased, and through improper cooking so much of the flavor and nutritive value be lost that it will be served as a tasteless, unattractive dish, from which the human body is able to assimilate very little, and which palls on the appetite and upsets the digestion.

It has been my experience that many of the people employed in the kitchens of our hospitals are inclined to give very little thought to this important matter of using fresh or green food materials while still in their best condition, nor are many of them trained to cook things in such a way that the flavors are properly developed or retained, or that their greatest food value and digestibility are obtained.

I might digress just a little here to say that the cooks are not altogether to blame for this. In employing a cook, the hospital will almost invariably ask for experience or ability to cook, rather than ask for knowledge of cooking—or perhaps it is better to say neglecting to ask for the knowledge as well as the experience. A cook who has had many years' experience began his career before food values or food composition were subjects for study, and because he has done a thing for twenty years, and it has passed muster, to him it

is the proper way to do it, and his ability to cook is proportionate to the quantities of these things he has prepared during the twenty years.

Our larger hotels and restaurants are paying their cooks more than our hospitals of corresponding size, and asking of them chiefly that they serve food highly seasoned—usually at the sacrifice of natural flavor—accompanied by rich sauces and elaborately garnished. But in which of these hotels or restaurants can you get a potato which is well cooked, yet dry and mealy, or a "boiled" egg that is evenly cooked and tender, or a vegetable that is not swimming in fat, or a salad that is really crisp? It is true that this very feature of hotels and restaurants does much to furnish patronage for the hospitals, but it is the business of the hospital to remedy it in so far as possible.

What inducement, then, shall we offer in order to make it worth the while of our cooks to learn how food should be prepared in order to make the most of its nutritive value and at the same time not interfere with its digestibility? One step is to raise the status of the profession, and that will be a long and slow process; another and greater inducement will be to pay more salary and thereby get more competent people. At present it seems to be the part of the trained dietitian to accomplish what she can in the way of proper preparation and serving of food with, in many instances, not only inconvenient working quarters and inadequate help, but often an utter indifference of long standing, if not open opposition—not only in the kitchen, but from other departments as well.

In addition to the problems of buying, storing, and cooking of food materials comes the question of properly utilizing or distributing them. If meat is bought by the carcass, where shall the more nourishing cuts be used and where those cuts which have more delicate flavor? What shall be done with the cuts from parts of the animal most exercised, consequently with harder muscle, fiber, and connective tissue, yet with a good percent of nourishment. Fruits and vegetables are not always delivered in the most desirable condition. What shall be done with that which is overripe or too green for the purpose planned?

How are the left-overs to be utilized so as to be really economical? Often there is a small amount of meat, vegetable, fruit, or pudding remaining, though not enough to serve all who eat in one dining room or ward. Shall we have such a routine established that these cannot be served to the people for whom they were originally planned? Or shall they be eaten by the employees in the kitchen—perhaps in addition to their regular meal? Shall they be kept very religiously for a few days and then disposed of in some wasteful manner? A small quantity of material wasted here, a small amount not utilized there, may in a short time aggregate quite a large sum. Where shall we make "good solid food" the first thought, and economize on time, and where shall we give more time to making daintiness and attractiveness the greater consideration?

The tendency on the part of the people employed in our kitchens has been to have a set of menus or dishes with which they were thoroughly familiar, and continue to use them indefinitely, thus giving institutional food its present reputation for sameness and unattractiveness. People go into an institution holding this prejudice and with their minds made up to be critical, and in most of hospitals they are not disappointed.

One who attempts to introduce variety into the diet and instill into the employees in the kitchen the proper attitude toward a judicious use of all food materials, at the same time instilling into the people being fed an attitude of respect rather than criticism, has a most prodigious task, one that will require much time and patience, but it is one worth while.

Work was started last month on a group of new buildings for the Brooklyn (N. Y.) Hospital, at DeKalb avenue and Raymond street. The present Low Maternity building will form the nucleus of the new plant. It will be remodeled and will stand as the central structure, from which will radiate two main pavilions, a nurses' home, a central heating plant, and a service building. Corridors on either side of the Low Maternity, which is to contain the administration offices and the main operating room, will connect the two pavilions on each floor. The pavilions will consist of four stories and basement, with roof gardens. All of the new buildings will be of red brick and terra-cotta, with limestone trimmings. The hospital will have 225 beds for patients, including thirty-five private rooms and private wards for 38 patients. A balcony is provided for each room and for both the private and public wards. The main roof garden is to be so constructed that patients who require it may be treated there during their entire stay at the institution. There will be a separate roof garden for children. The new group will have its own electric plant, refrigerating plant, and an up-to-date vacuum system. It is estimated that the improvements will cost over $700,000.

The private sanatorium being erected at El Paso, Tex., by Dr. C. M. Hendricks, of El Paso, and R. D. Harvey, of Cleveland, Ohio, will cost $75,000, and promises to be one of the most modern institutions of its kind in the country. The building will be of the mission style of architecture and fireproof. It will be constructed of hollow tile, with reinforced concrete floors and metal tile roof. The interior will be finished in stucco. The main building will measure 220x60 feet and will be three stories high. The wings will be two stories in height, and the rear wing, which will include the kitchen and dining room, will be separated from the main building to prevent kitchen odors from penetrating the living apartments. This rear wing will measure 60x60 feet. There will be sixty rooms in the sanatorium, each to be connected with a screened and canopied sleeping porch and have a private bath. Practically all of the baths will be showers. The only tubs in the building will be those for special treatments. The floors and bases will be of cement, and will have cove corners to prevent the lodgment of dust and germs. All doors will be flush, and the molding and panels and other obstructions have been eliminated from the interior to increase the possibilities for cleanliness. The interior walls and woodwork will be white enamel.

THE EVANSTON GENERAL HOSPITAL'S CONTAGIOUS PAVILION.

Surgical Cleanliness Made the Test of Integrity in the Isolation, but Physical Segregation Provided For—Convenience and Economy of Administration Predicated in the Architecture—Some Plans and Views.

By MEYER J. STURM, Chicago, Architect.

THE rapid development of the scientific treatment of contagious diseases has given rise to the necessity for designing hospitals to keep pace with such development. Herewith is given a plan of such an institution, wherein a highly developed technic for the handling of communicable diseases has been instituted. In a few words, this technic consists of the necessity for an attendant, or any one coming in contact with the patients or anything in the room, to be surgically clean before going to another patient. If an attendant does not touch anything in the room, then the hands are considered sterile if they were sterile before the attendant entered the room.

Every arrangement has been made to carry out this technic strictly. When the doctors, nurses, female help, or orderlies enter the hospital, they go respectively to the rooms marked 45, 35, 24, and 26, remove their outer garments and put on a gown which is worn throughout the day in the hospital. These gowns are sterile. The attendant is then ready to go on duty, and if, when they are entering a room, it is necessary to touch the patient or anything in the room, they put on a second gown over this first gown, and in some cases rubber gloves, and, when they are leaving the room after a patient has been taken care of, the gown is first taken off, the hands sterilized under the ordinary method of sterilization, and they are then ready to go about their duty to other patients.

The corridors, diet kitchens, service rooms, and nurses' quarters are considered neutral. Every provision has, however, been made on each floor, the second floor being typical of the third and fourth floors, so that every floor can be practically divided into two separate hospitals, so that any one disease can be treated in that portion and separately isolated if necessary.

The admission of patients is done through the receiving rooms 5 and 7, the patient being taken into the bath rooms 6 and 8, respectively, and given an entry bath, and then put into the observation wards marked 4 and 9, respectively, until a thorough diagnosis of the case has been made. If the case is fully developed and diagnosed, the patient is taken indirectly to the ambulance entrance door, through hall 14 to the elevator, and up into the hospital, and to the room or ward, as the case may be. The patient's clothes are taken into the disinfecting plant in the basement, and, after they are disinfected, put into locker room 50 and kept there until the patient is discharged.

When discharging the patient, the friends come into entrance 52 and lobby 51, the patient is brought to the discharging room 47, disrobed, given an emergent bath, the clothes are brought from the locker room to the discharging room, or, if the clothes have been destroyed, the friends or parents bring the clothes to the waiting room 48, the nurse taking them into the discharging room, and the patient is robed and sent out through the lobby.

All those who have business to transact in the hospital come in by the front entrance to lobby 39, the attendant in the general office having control of all the doors on the entire floor through automatic door openers electrically controlled, so that no one can get into any part of the hospital from the public spaces without the consent of the general office attendant. The remainder of the first floor is plainly designated. A viewing room, which is also the autopsy room, marked 13, and a chapel (12) is provided. The chapel is separated from the viewing room by large plate glass opening, the friends coming in through hall 18 and entering the chapel.

Figure 3 is one of the rooms, showing the wash-up sink and the viewing window. All rooms and wards have these viewing windows, and as far as possible they are put opposite each other, so the children can look across and see the children in the other rooms. The cut-offs in the corridor are shown on the second floor plan.

Each floor is provided with one 4-bed ward and two 2-bed wards, and a number of private rooms, some in suites with bath, the plan being practically symmetrical about a central axis, except for the large ward at the center of the building.

The elevator, linen supply room, the nurses' station, and the operating room on each floor are in the central neutral area. All corridors are considered neutral area also. Each end of the building, moreover, is provided with its own service and toilet rooms.

There is a dish sterilizing room, into which all dishes and utensils used on the floor are taken, being put into the dish sterilizer on the dish sterilizing room side, where there is an opening between this room and the diet kitchen. The steril-

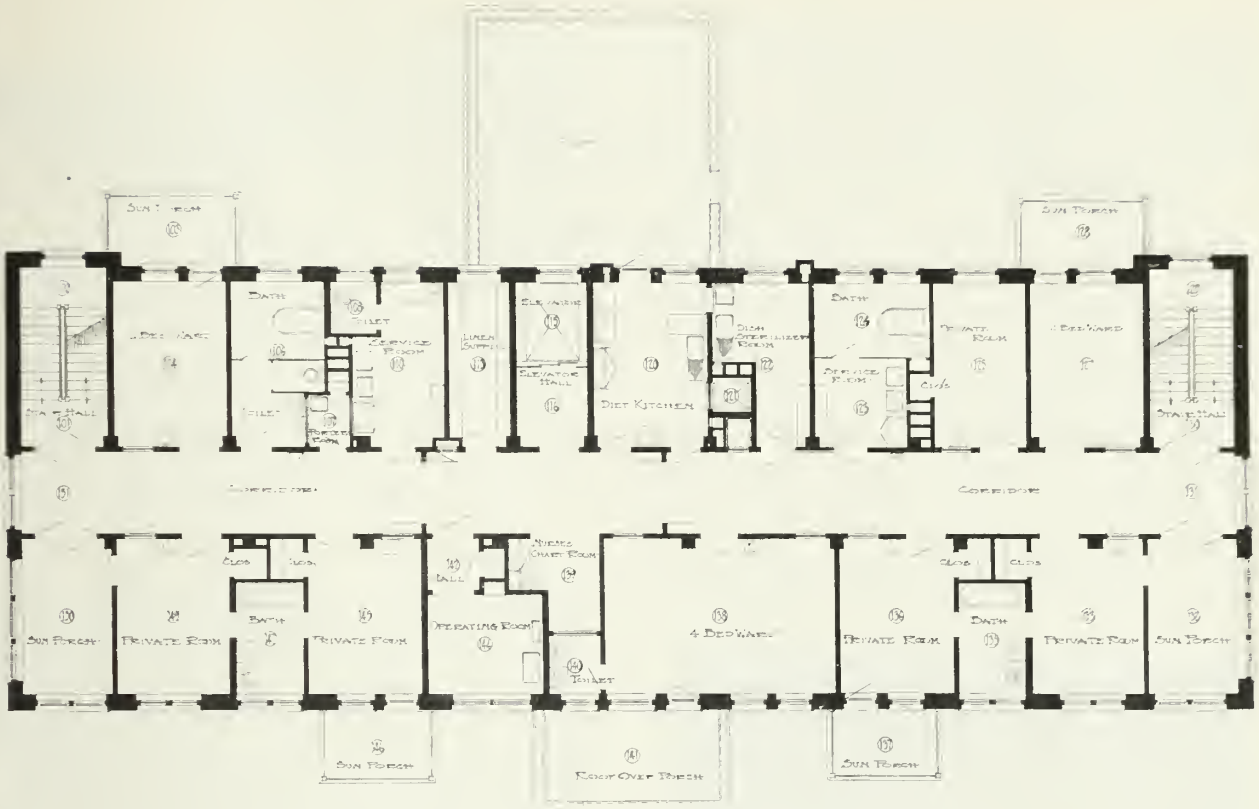


Fig. 1. Evanston General Hospital—Isolation pavilion. Typical patients' floor plan.

izer is operated by hydraulic lifts, so that the infected dishes can be put in on the dish sterilizing room side and sterilized, and the attendant on the diet kitchen side operates the foot pedal and the dishes are brought up on the trays, hydraulically taken off, and washed in the diet kitchen and are again ready for distribution. All refuse is put into watertight paper bags and destroyed by burning.

At either end of the building for the private rooms where there are suites there are large sun porches provided within the area of the building.

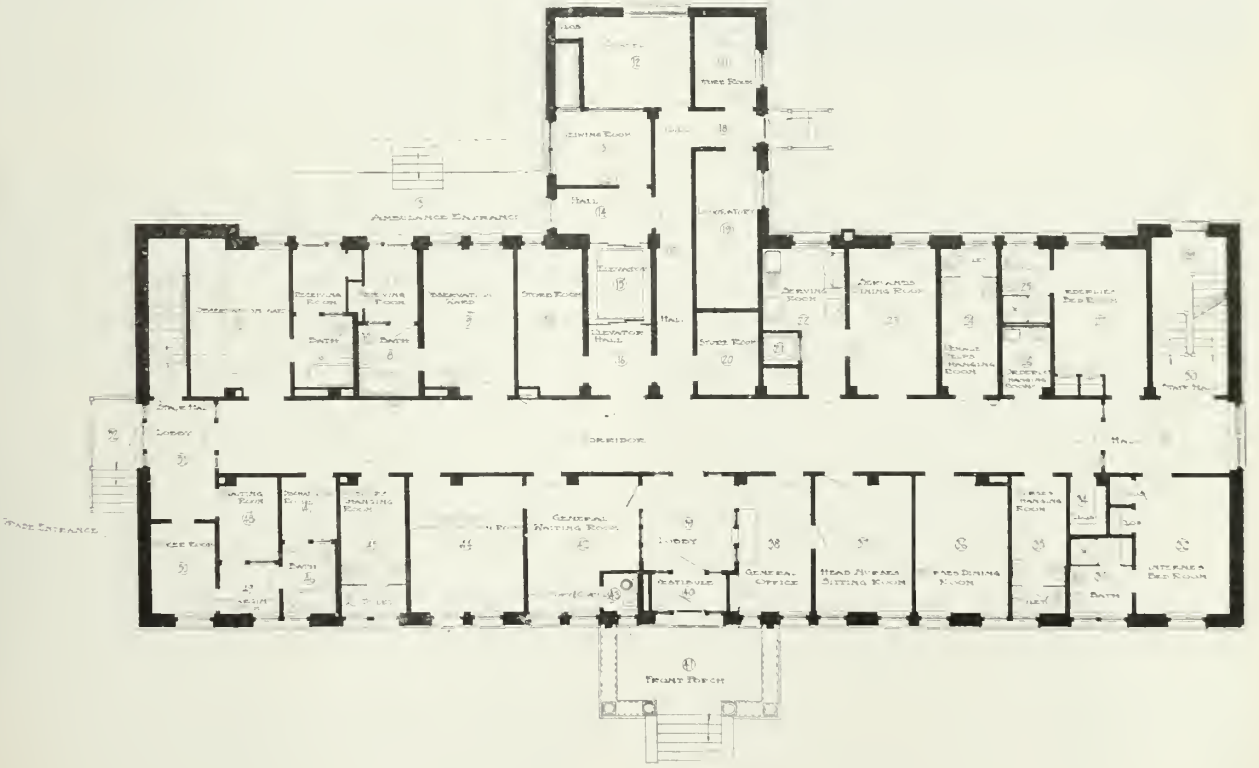


Fig. 2. Evanston General Hospital—Isolation pavilion. First floor plan.

All other rooms in the building throughout have large porches, so that every patient in the hospital can be given outdoor treatment.

Every room and every ward is provided with a wash-up sink. Special provision has been made for the sterilization of all bed pans, a feature in this connection being the combination bed-pan rack and blanket warmer, in which only one set of coils is necessary, where all the blankets are not only in a special cabinet, but are also kept warm, and at the same time the bed pans are kept dry and at the proper temperature.

At each nurse's station there is a medicine cabinet, with sink, and here there are also the house telephone, public telephone, and relay signal system station. The signaling of nurses is selective for each end separately and for the ward separately, indicating in the diet kitchen and in both service room, and at the same time indicating at

Fig. 3. Evanston General Hospital—Isolation pavilion, showing corridor and room beyond.

the nurses' station. In addition to the indication of the floor lights at the nurses' station, each floor is indicated on the other floors, respectively, at this station, showing the exact location on each floor from which the call has come, the entire signaling being selective by location and color, so that the night nurse, being on any floor, will know immediately from what section of any other floor the call has been made.

The entire building is absolutely fireproof. As much cleaning and sterilization is necessary in the hospital, every precaution has been taken to minimize the amount of work necessary, and also in order that there will be the least wear and tear on the building and its contents. The exposed plumbing throughout the building is, therefore, made in white metal instead of the ordinary nickel-plated brass, and all of the fixtures are either porcelain or vitreous china. All water closets are of the wall-hanging type, and all tubs, except those which stand entirely free on all four sides, are built in.

The operating room walls are lined up to a height of 6 feet with vitrolite, and above this they are painted. All walls and ceilings throughout the entire hospital are heavily enameled. The floors of the first floor corridor are 8x8-inch compressed tile; all stairs, stair halls, elevator halls, and all other floors on the first floor are in flake mosaic, except in the doctors' consultation room (44), the head nurse's sitting room (37), and the interns' and orderlies' bed rooms, which are of linoleum.

On the second floor the floors in the two sun porches, toilet room, bath rooms, service rooms, diet kitchens, and operating rooms are of cork tile. The remainder of the floors, except in the stair hall and elevator hall, are 6 mm. battleship linoleum.

The heating of the building is done on forced circulation hot water, and there is a large central plant for this purpose. All of the ordinary food supplies for the building are taken from a service kitchen, which is centrally located on the grounds. All of the buildings in the group of hospitals to which this is attached—the Evanston Hospital—are connected from this main service building by large tunnels for the purpose of conveying food. Food is carried through the several buildings by automatic electric dumbwaiters, sufficiently large to take a food cart for this purpose.

An operating department which will represent the last word in sanitation is being fitted up for the Battle Creek (Mich.) Sanitarium. The walls and ceilings of the rooms and corridors will be covered with polished glass, and the floors will be of smooth porcelain. The use of glass will make it possible to wash the walls and ceiling by shooting streams of hot water over them, thus killing whatever germs may accumulate. All air passing into the operating room will be filtered and washed.

The Baptists of South Carolina, who recently purchased the Colonia Hotel, with two acres of land, at Columbia, for the purpose of establishing a hospital, have recently negotiated a deal by which they come into possession of the Knowlton Infirmary at Columbia, a private institution built and conducted by the late Dr. A. B. Knowlton. It is understood to be the plan of the church to use the Knowlton institution as a temporary hospital, awaiting the erection of a larger and more modern building. It is probable that the hotel property will be converted into a home and school for the nurses in training.

The J. S. & W. M. Rice Lumber Company, of Ward, Louisiana, has enough confidence in a pellagra cure which Dr. A. L. Chapman of that place appears to have discovered that it is building a sanitarium in which the cure may be further demonstrated. About two years ago, it is reported, a patient from Texas came to Dr. Chapman with a case of pellagra in the advanced stage. Up to that time the doctor had not treated a case of pellagra, and he took a great deal of interest in this one. The patient recovered speedily, and since then, it is said, many others have come him and been cured. Officials of the lumber company assert that they are not going into the venture with the view of making money out of it, but they feel that if Dr. Chapman continues to meet with the success of which his work so far has given evidence, he can do a great work for humanity, and should have proper facilities for the treatment and close observation of his patients.

PLANNING FOR HEALTH—THE PRESSING PROBLEM.[1]

Hospitals Are Undeveloped—Must Broaden Out Into Comprehensive Health Centers—A Few Good Hospitals Better Than Many Poor Ones—Wise and Sympathetic Leadership Demanded—Land to Be Needed For the New Era—Conveniences of Travel For Rural Communities Must be Better - Road Building is Health Building.

By FREDERIC BRUSH, M. D.,
SUPERINTENDENT BURKE FOUNDATION FOR CONVALESCENTS, NEW YORK CITY.

THE unifying of health agencies is a pleasing subject, but there "ain't no sich animal." There's a promising menagerie. It's like my getting out a certain beautiful plan for new communal and unified living in my old home section. I went early with it to the strong man there—Rufus Shutts. Rufe has a brain-case like the mummy of Rameses II.

"That's fine," said Rufe; "that's what I call about perfection." Then he waited; I waited. He went on: "It's all right except for one thing—there ain't been quite *time* enough since your ancestors liked to serve up their wives' relations for Thanksgiving dinner."

So, distressing as it may be, we'll drop that part of the title—or, rather, leave it, an inspiring sign—and go round awhile, as we have to do somewhat in health planning and health work. Let us consider, then, *planning for health*—correlations later.

All along it is well to have some working conclusions about governmental health agencies as distinguished from the corporate ones, as municipal hospitals vs. so-called private corporate hospitals; health boards and private associations for improving this or that. Shall energies and dollars henceforth go more to the government agencies or to the private, with their usual public functions? This question underlies all your planning and work.

The answer is, from years' experience in the many states: so individualistic are we and so unsatisfactory in our local governments (city especially) that somewhat the larger part of health progress for years yet must be accomplished through these semi-private corporate, rather peculiarly American, bodies. But government health institutions are going to gain, and all plans should aim to advance and increase them as rapidly as better citizenship leads safely. Then, as strong governmental agencies take on more of the work, private corporate effort finds abundant continuing field in experiment, path-finding, inspiring, gap-filling, watch-dogging, policing, coordinating.

Correlation will come, then, not much from saying, "You and you and you are now to correlate," but through health-work, doing and done, better—until the faulty-weak and the misplaced and the culpable are overspread, or drawn in to help.

We come to the question of centers of action. How many? which? where? There will be fewer twenty years hence. First two are health board and hospital. To get on today, we must assume here a state health department, with adequate money and powers, directing health matters from Back Bay to the western crossroads. Successful planning for the state's health assumes this.

The hospital is yet underrated and underutilized. Most of them could double, and some quadruple, their efficiencies, and without much more building. These newer values are coming through the auxiliary services—the *home and community extensions of the hospital;* some of them—laboratory, social service, tuberculosis prevention, infant saving, district nursing, care of convalescents, aged infirm, chronics, genitourinary diseases, early nerve and mental weakenings, physical therapy, training handicapped, and, most important, the dispensary.

This extension work is only started. Remarkable economies and achievements are already showing. First-class dispensary treatment, with follow-up, costs about 50 cents per patient per day; bed treatment, $2.50; and the first quite largely replaces the second. And money may be got more readily for these special activities. Tell the givers there are now better things to endow than beds. Through these arms your moderate-sized hospital on the hill may reach to the farthest borders of the community, handing out health, and correlation grows best in this extension field.

Health planners have a duty and opportunity in seeing that new hospitals shall be rightly sized and located and equipped—even preventing some and bringing consolidations and cooperations. Hospital survey of the state, determining needs, locations, overlappings, unjust burdens, etc., would get hospital standardization in a state while we talk and write about it for the nation. Which brings us to heads—leaders, trained workers. They're scarce. It's a young vocation. Health planning here first catches its toe. But they must be got—and given more pay and power and honor than in the past. Plan fewer main

[1]Extract of a paper read before the first mass meeting of City and Town Planning Conference at Boston.

heads. A competent person sooner than any system brings correlation into a wide district.

Have more women do health work. A woman marries one of these jobs. A man takes it, and keeps an eye westward—or over the fence. The woman mothers her community; the man tries to "man-age" it. If she divorces the job, 'tis to marry another, better, of same species. Sometimes she wavers temporarily to marry a man—more or less; even then she is not lost, but through life goes on doing communal work. Ransack your state, and see them first in other states, to fill these places—from hospital and health board heads to $7-a-week farm nursing.

Conclusions.—Correlation of health efforts, gradually through work, backed by authority, with stronger heads and hospitals, and hospital extensions. The tools are here, mostly in hand. Not the poor nor the rich, but the people of moderate means, the middle-class majority, are most in need of public health aids. Accept and extend the principle of the patient's paying reasonably and increasingly for services.

The main first gap is lack of means for control of the disease carriers—tuberculous, venereal, typhoid, throat and nose, etc.

Plans.—In your four or five large population centers, (1) advance the municipal hospitals; (2) build also on the best corporate ones; (3) extend the arms of the hospital, especially the dispensary—substations and dispensaries, better than reduplications of weak hospitals; (4) get land within thirty miles of the center—it will be needed in health-making sooner than is thought.

The Smaller City.—(1) Early consider the municipal hospital—attach to it, or to the corporate in its stead, most of the big city auxiliaries; (2) plan into it, under one head, many of the special departments—for convalescents, chronics, genitourinary, the aged infirm, handicapped, etc.; (3) land outside the city will be needed—some one will give it.

The Rural Community.—(1) Nearly all country life betterments now depend on getting more people together more—done only by having them travel farther; road-building is health-building, so the new town or county hospital should be planned to serve a wide territory, affording standard equipment, the extension services (home-nursing especially), and be health headquarters. (2) Rural public opinion awaits patient, organized effort to its right awakening; some coercion here and there will prove salutary; the most pressing health problems are now in this field.

A large dam is being built across the North Concho river near Carlsbad, Tex. The purpose of the structure is to store water for the Texas tuberculosis sanitarium located at Carlsbad.

CARE OF THE FEEBLE-MINDED.

Institutional Segregation Denied to 133,000 Children Who Menace Posterity—Defective Girls of Child-Bearing Age Are Greatest Danger—Dr. Hart's Sane Views.

BY OUR NEW YORK CORRESPONDENT.

The menace of the feeble-minded to our own and future generations, through the seemingly impossible problem of segregation, has only during the past decade received the attention its magnitude demands. This question past generations have neglected, in the futile hope of its elimination through the law of "the survival of the fittest."

Today, thanks to the Binet system of psychological test, supplemented by the tests of Doctors Huey, Healy, and others, we are beginning to realize its grave importance. Applying these tests to the children in our public schools, experts tell us that at least 2 percent are mentally defective. New York City alone, according to the estimate, has 15,000 feeble-minded children in the public schools.

Conservative authorities have placed the number of feeble-minded persons in the United States at 200,000, and estimated that this class constitutes one-fourth of the population of our prisons and reformatories. The present capacity of our institutions for the feeble-minded is about 20,000; almshouses contain about 16,000, and there are in the neighborhood of 5,000 in institutions for the insane. The total number receiving public care in the United States, according to competent authorities, is about 67,000, thus leaving, at a low estimate, 133,000 without institutional advantages or control.

Are these unfortunates on the increase? The Royal Commission of England came to the conclusion, after four years of study of this problem, that they were increasing at twice the rate of the general population. Careful investigation has shown that at least two-thirds of the feeble-minded children are of feeble-minded parents, or grandparents, or both. Dr. Henry H. Goddard, of New Jersey, does not believe that any "truly feeble-minded child was ever cured," and other competent authorities agree with him in saying "that it is useless to try to develop the latent mentality of feeble-minded children, because it does not exist."

What steps have been taken or remedies proposed for a solution of this problem that threatens the very foundation of society? Sterilization has long been advocated by many penologists and alienists as the one certain preventive measure. Eight of our states have passed laws providing for sterilization of certain classes of defectives, but in only one are they enforced. This remedy can be only of restricted service until public sentiment is developed to sustain the execution of such laws—perhaps in two generations, or until something better offers. Restrictive marriage laws have demonstrated that their influence can be only partial, inasmuch as these defectives reproduce their kind regardless of marriage, and in far greater number than normal people. Segregation, that is proving so practical and effective for the insane, remains, in spite of the magnitude of the undertaking, the one available solution. We must not forget that thirty years ago the segregation of the insane seemed equally impossible.

Dr. Hastings H. Hart, director of the Department of Child-Helping of the Russell Sage Foundation, has for years been indefatigable in his efforts to find a working program to meet the problem of mental defectives. He believes in legislation, to give the state absolute control, as is the case with the commitment of the insane, if real results are to come from segregation of the feeble-minded.

Since it is impossible to provide in the near future for all of this class, Dr. Hart is strongly advocating (1) that in every new institution for feeble-minded children preference be given in admissions to girls of child-bearing age, and (2) that every institution for feeble-minded children shall cease to receive girls under the age of twelve, or boys of any age, until every feeble-minded girl of child-bearing age is provided for.

CULTURE INCUBATORS FOR POLICE STATIONS.

Chicago Health Commissioner Saves Time and Hastens Work of Inspectors by Aid of Police.

The amount of work one can do must necessarily depend a good deal on various economies that may be practiced. Health inspectors in large cities are limited in the scope of their work by the territory they have to cover and the time it takes to get around. There are never enough inspectors allowed by the appropriations to do all the work the health officers know ought to be done, so any saving of time and labor must be welcomed. Moreover, time is often a very important element in the spread of a communicable disease.

Dr. George B. Young, commissioner of health of Chicago, has devised a little piece of technic that saves his inspectors a lot of time and labor, and gives them about twenty-four hours' earlier start to head off an epidemic or to make proper arrangements for a patient suffering from diphtheria. It consists of a line of incubators located in all the police stations of the city, which the inspectors use to start the incubation of their throat cultures. Dr. Young has kindly prepared the description of the technic as follows:

In handling diphtheria cultures, it has for a number of years been the practice of the Chicago health department to make use of the police stations as points of collection for diphtheria culture tubes, and of the police messenger service as a means of transportation from these points to the laboratory. The enormous area covered by the city of Chicago made some such method imperative; otherwise delays of a day or two might easily result from the time the culture was made to its being received at the laboratory, it being entirely impossible for the department to finance any system of collection from drug stores or other points of deposit. This method proved quite satisfactory, but still involved considerable delay between the time of taking the specimen and the time that it could be placed in an incubator in the department.

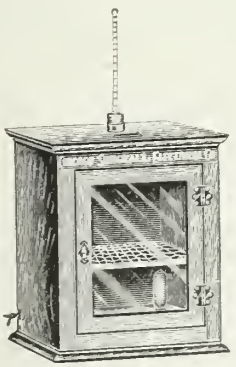


Fig. 1. Electrically operated incubator.

In the fall of 1913 the department determined to install incubators in all the police stations. We accordingly purchased forty-one electrically operated incubators (Fig. 1), each with an inside measurement of 10x10x10 inches, and two incubators 24x18x17½ inches inside measurement. The price of the small size was $15 and of the large size $45.

We installed one of the small size in each of the police stations, except two stations where the character of the neighborhood and the size of the district necessitated the use of the larger size. The incubators were installed in such a way as to present a neat appearance, and are kept in accurate operation by means of an inspection service. Each incubator, before being installed, was carefully tested and standardized. The inspector in charge of maintaining the service makes regular rounds of the various stations and submits formal report on the following form:

INSPECTOR'S DAILY INCUBATOR REPORT.

1. Incubator No. .....
2. Precinct No. .....
3. Location .....
4. Date .....
5. Time..... a. m. ..... p. m.
6. Temperature on arriving.....
7. Temperature when leaving .....
8. Number of bulbs dead .....
9. Number of bulbs replaced .....
10. Thermostat buzzing?.....
11. Current turned off?.....
12. Shelf in place?.....
13. Regulations on door?.....
14. When call again?.....
15. New thermostat installed?.....
16. How long have cultures found in incubator been there?.....

(Signed).....

Supervising Medical Inspector.

Form H. D.—M. 574.

A card of instructions is attached to the inside of the door of each incubator, and a copy of this card has been embodied in a police order by the general superintendent of police, thus making the observance of the directions contained on the card obligatory on the members of the force:

DUTIES TO BE OBSERVED WITH REFERENCE TO HEALTH DEPARTMENT INCUBATORS INSTALLED IN POLICE STATIONS.

1. Incubators are to be kept running constantly.

2. Persons other than the authorized Health Department representative assigned to incubator inspection will under no circumstances be permitted to adjust the regulator or tamper in any way with the apparatus.

3. Officers will report at once by telephone to the Health Department, Main 447, Local 195, any of the following conditions:

(a) Carbon lamps burned out.

(b) Temperature of the thermometer—30° C. or above in the small incubators, or 32° C. or above in the large incubators.

(c) Apparatus out of order, as evidenced by buzzing or sparking at the thermostat, or by lights going out permanently.

4. Officers receiving cultures at the police stations will mark the hour of receipt and the date, together with the precinct number of the station, on the back of each single envelope or each package of envelopes, as the case may be, and place the envelope immediately in the incubator.

5. Deliveries of cultures to the City Hall will be made by the Police Department as heretofore as expeditiously as possible, particular effort being made in all cases to deliver cultures on the same day they are received. The Health Department is open for the receipt of cultures at all hours, night and day.

James Gleason,
General Superintendent of Police.

The messengers make from one to two trips a day from each police station to the City Hall, depending on the amount of business done by the precinct. As the hour at which the culture is received at the police station is stamped on the package, the clerk receiving the cultures at the laboratory is able to tell at a glance whether a further incubation period is necessary. In a large majority of instances no further time is necessary, and it is possible to pass the specimens on to the bacteriologists for examination as soon as they are received.

The MODERN HOSPITAL

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Contributors, subscribers, and readers will find important information on advertising page 26.

Constructive Pan-American Quarantine.

The plea of THE MODERN HOSPITAL, in its leading editorial of last month, for a constructive Pan-American Quarantine, by way of a permanent international commission, has attracted wide attention, and in some quarters considerable surprise.

By some excellently well-informed people it had been generally understood that existing agreements between the nations of the Americas afforded all necessary provisions for a working quarantine. That this is not the case will easily be gleaned by a cursory glance at the present status of the matter.

The International Hygienic Congress of 1894 at Paris did little more than establish the then scientific status as to the sources, directions of communicability, and methods of prevention of yellow fever, plague, and cholera. Some recommendations were also made concerning the approaches to the problem by the various nations, but this conference ended its good offices at that point.

The second International Sanitary Convention of the American Republics, held in Washington, D. C., October 9-14, 1905, under the auspices of the Governing Board of the International Union of the American Republics, created and signed a code of sanitary rules governing all phases of quarantine, and these rules, after approval by the authorities of the several republics, have prevailed, with minor changes by subsequent conventions, until the present time.

These rules are the finest possible expression of what a constructive quarantine should be and of the willingness of the American Republics to enter upon some desirable arrangement; but unfortunately the social and political relations between the participants were not such as would lend themselves to a plan of cooperative accomplishment—that is to say, each republic was in entire accord with the scientific dicta of the rules, but preferred to act on them independently. A few quotations from these regulations will develop this point more conclusively:

Art. I. Each Government should immediately notify other governments of the first appearance in its territory of authentic cases of plague, cholera, or yellow fever.

Art. II. This notification is to be accompanied, or very promptly followed, by the following additional information: 1, neighborhood where the disease has appeared; 2, date of its appearance, its origin and form; 3, number of established cases and number of deaths; 4, for plague—the existence among rats or mice of plague, or of an unusual mortality; for yellow fever—the existence of *Stegomyia fasciata* in the locality; 5, measures taken immediately after the first appearance.

The next few articles prescribe that the above information is to be conveyed through diplomatic or consular agents in the capital of the infected country, and that the information is to be conveyed at least weekly during the persistence of the disease; that the information must state just what prophylactic measures have been taken, including the inspection and disinfection of ships, destruction of rats, mosquitoes, etc.

Art. VIII. To limit the measures to the affected regions alone, governments should apply them only to persons and articles proceeding from the contaminated or infected areas. But this restriction, limited to the infected area, should be accepted only on the formal condition that the Government of the infected country shall take the necessary measures to prevent, unless previously disinfected, the exportation of articles (named in Art. XII) coming from the contaminated area; and, 2, measures to prevent the extension of the epidemic; and provided further, that there be no doubt that the sanitary authorities of the infected country, have faithfully complied with Article I of this convention.

These quotations from the code are sufficient to make the point—namely, that the integrity of this quarantine is predicated, not only on independent action of a country hard pressed by distressful conditions and overanxious to mitigate the severity of a ruthless segregation from the rest of the world, and hence liable to minimize the state of affairs, but on the handling of an epidemic by men, perhaps in small ports, whose training, professional attainments, and judgment, in a pressing emergency, are unknown quantities.

Under the commission form proposed by THE

MODERN HOSPITAL, each republic would give into keeping of a regular service of its own Government the technical handling of a state of things within its own area, just as it would in the case of customs collections or revenue regulations, the only difference being that this business, equally important to all other countries, would be done under the iron hand of a technically trained and thoroughly responsible commission made up of representatives of all the countries, and that the individuals charged with the responsibilities of conducting the campaign in an outbreak would have been chosen for the work and thoroughly trained by the commission, itself made up of the best scientific and executive personnel that the several countries could offer.

Please let it be understood that the purpose of these editorials is to stimulate discussion in the next few months, so that the next Pan-American Sanitary Convention, which takes place in Montevideo in December, can be ready to formulate a concrete scheme of constructive quarantine that can be enforced—not for repressive segregation purposes, but to the end that there shall be an absolute confidence in the methods employed which will permit uninterrupted intercourse, no matter when or what happens.

A Story of Advertising.

When the preliminary arrangements for the launching of THE MODERN HOSPITAL were being considered, the subject of a practical advertising policy for the contemplated journal was discussed, and it was the opinion of those who were concerned in the undertaking that such a policy should be wrought out of actual experience rather than proclaimed in advance as a theory. As it seems proper at this time that our readers and advertisers also should know something concerning the methods pursued in the upbuilding of that which we consider an important part of the service of this publication, this little story is told on this, the first birthday anniversary of THE MODERN HOSPITAL.

The first number of THE MODERN HOSPITAL was received with such universal expressions of approval that even the most optimistic concerned in its production were completely surprised; the daily press spoke of it in terms of highest commendation, and the editorial comments of the scientific journals were full of praise. There were letters of appreciation from high official sources, equally welcome messages from men and women of recognized leadership in the hospital world; and, perhaps most gratifying of all, there were private letters from personal friends of the editors and publishers hailing the advent of the new servant of hospital efficiency with offers of cooperation that augured material aid in the ultimate realization of the great destiny predicted for it.

As these welcoming messages came pouring in, the editors and publishers realized that their work had been launched with a degree of success beyond their most sanguine hopes, and they realized something else—namely, that THE MODERN HOSPITAL had been accepted at more than what appeared to be its face value; that it had practically been charged with a great mission—leadership in the best and highest thought concerning that most essential province of human endeavor, the scientific relief of physical suffering and the cure of disease.

One night, the eve of Thanksgiving last, after several issues of THE MODERN HOSPITAL had been published, a meeting was held in the office of the journal. It was a serious gathering, each member appearing somewhat awed at the unexpected proportions of the task presented. One of those present began to read messages of congratulation, editorial comments, and letters that had been received. More than an hour was thus consumed with not a comment, during the reading, from those who heard; there were no self-congratulations, no mutual laudations for the work that had been done. At the end of the reading there was an interval of silence, which was broken by one of the sponsors of the publication who had at the outset agreed that no material aid should be lacking to make THE MODERN HOSPITAL all it should be.

"Well, gentlemen," he said, "I was under the impression that we had started a journal; it seems, instead, that we have on our hands a crusade. Our bearings were in some respects faulty, and new stakes have been set for us better than we had set them for ourselves. We are headed higher; we must follow the new path pointed out for us."

For several hours that night policies were discussed concerning the work to be done, which presented serious problems for solution, and required that careful plans be made. Before the meeting adjourned the business policy of the journal was mentioned—with hesitation at first, then more decisively—*and it was determined that, as a definite policy of* THE MODERN HOSPITAL, *not one line of advertising should appear in its pages that did not present a product for use in hospitals that the most critical member of its editorial staff could hesitate to approve and recommend.* Since that time many thousands of dollars' worth of advertising have been declined in accordance with that policy.

Some of the products now being advertised, about which there was possible doubt, have been

subjected to the most searching scientific inquiry by experts whose business it is to make such investigations, and both money and time have been given to this work. THE MODERN HOSPITAL has assumed the herculean task of evaluating the large number of articles offered for use in hospitals. Connections have been made with recognized authorities, with institutions for scientific research, and with individual leaders in every branch of modern thought that might in any way contribute to a careful, thorough analysis and a correct evaluation of every product and every service offered for the use of hospitals and for the benefit of the public health. If the detailed story of the investigations that have been made regarding some of the advertising in this number were told, it would be a liberal education for hospital people.

The old order of newspaper and journal publication—that news shall be edited in the counting room—has been reversed, and in THE MODERN HOSPITAL offices the advertising passes over the editorial desk before it is accepted. While the purpose behind this policy is wholly in the interest of hospital efficiency, and in line with a firm conviction on the part of the editors that THE MODERN HOSPITAL has a serious mission, the observer need only glance at the advertising pages to assure himself that the policy pays.

In consonance with the policy adopted, the advertisements submitted for these pages are subjected to the following requirements: first, they must appertain to hospital needs; second, they must represent products or devices that have been passed by critical scientific tests; third, the subject-matter or copy must present a truthful and understandable statement of facts, or be revised to meet that requirement.

On this basis we intend that all advertising shall represent honest products and mark the scientific progress in mechanical and other devices in such a manner as shall appeal directly to and assist the hospital administrator in making intelligent selections for the use of his institution. We expect by the application of these principles to create a mutual confidence and understanding that will be a threefold benefit to our readers, our advertisers, and ourselves.

It is the ambition of those concerned in its welfare to make the advertising pages of THE MODERN HOSPITAL in all truth a buyer's guide, and a working reference for purchasing purposes.

Mischievous Nursing Legislation.

We have gone far enough now to know that the California eight-hour law, as applied to pupil nurses, is a miserable fiasco from every logical standpoint. It does no good to anybody, least of all to the pupil nurses in whose interest it was supposed to have been passed, and it is doing an immense amount of harm in restricting the freedom of the hospitals of the state in their attempts to serve sick people efficiently.

But it was avowedly the purpose of union labor, at whose behest the law was enacted, to prosecute the principle of this law in every state in the Union, if it could be "put over" in the premier state of fads and foolishness. In keeping with this purpose, there is a proposal now before the people of the state of Washington to enact a similar law, but to go one more step and include graduate nurses. Think of it! Graduate nurses in private practice restricted to an eight-hour day! Comment is superfluous.

Then comes along Kansas. The Board of Health of that state last week made a ruling that no hospital should operate a training school unless it has more than 15 beds, with an average of 10 of them occupied.

There is no doubt that there are many hospitals in Kansas and elsewhere that operate training schools that should not be permitted to do so, but why a restriction on a per-bed basis? There are just as many hospitals very much larger than 15 beds that are criminally inefficient in their hospital service to patients, and consequently in their training of nurses. The small hospital may not offer a very wide range of service to pupil nurses, and the number of cases in each class may be woefully small; but if there are ideals, and conscience, and an educated, well-trained woman on the job as head of the small school, who knows what nurse training should be, her pupil who may see only half a dozen obstetrical cases in the whole three years, and not half as many of the communicable diseases, will be turned out far better equipped to practice her profession than the graduate who has been trained like a circus seal, or whose training has consisted solely of a menial servitude of three years in a hospital without a conscience.

Then why make the number of beds in a hospital the basis of efficiency? Are there no other terms that spell efficiency?

How would it do to let the training of the nurses, as exemplified in examination before the state board of nursing registration, be the test of the efficiency of the school? The state board of nursing registration might be clothed with the authority to close a school that did not give its pupils an acceptable training. If this course is taken, the board itself should be looked into carefully, and its personnel adjusted properly—two practicing physicians, one hospital superintendent, and two nurses, for instance.

Some of us have feared, for a good while, that

the leaders in the nursing profession were too insistent about legislation of radical sorts, and that there was entirely too much talk and too much thought about "shifts" and "hours of duty" and "schedules of pay," and other union labor fetishes, and too little thought about the dedication of the nurse to a vocation and profession that called for all her time and all her body and all her soul.

Now the whole nursing profession, backed up by the whole medical profession, and by the thoughtful, sane members of society at large, will have to band themselves together and exercise all their might to stem the tide that is sweeping them into the vortex to the union labor idealism that has for its object the leveling downward of the efficient to the measure of the inefficient.

Miss Graves' Papers.

In the August number announcement was made of a series of papers by Miss Lulu Graves on the general subject of "Food and Food Principles." In the meantime Miss Graves has accepted the invitation of Lakeside Hospital, Cleveland, to take entire charge of the commissary of that institution.

Miss Graves has already had a broad experience in dietetics, first as dietitian for Michael Reese Hospital, and since as dietitian for the Cook County Hospital, Chicago. Supported by the ambitions and ideals of Lakeside, with the impetus and stimulant of the Medical School of Western Reserve University, her field is now to broaden out immeasurably, and there is no doubt that we shall hear much and learn much from Lakeside in the near future concerning this vexing and complex problem of food.

A tentative schedule of Miss Graves' papers, eight in number, is as follows:

October—Second paper, "The Food." Food principles discussed; sources of food; function in the body. Composition of some common food materials and how they are utilized. Milk and its products—1, pasteurized; 2, sterilized; 3, peptonized; 4, eiweissmilch; 5, infant foods; 6, koumiss; 7, buttermilk; 8, butter and butter substitutes; 9, cheese. Tea; coffee; cocoa.

November—Third paper, "Composition of Food Materials and How They are Utilized in the Body," continued. Vegetables—green; starchy. Fruits—fresh, dried, canned. Cereals, legumes, eggs, poultry, fish, meat.

December—Fourth paper, "The People to be Fed." I, those with unimpaired digestion—surgical cases, maternity cases. II, those with very much impaired digestion with high temperature—gastrointestinal. III, those whose treatment is largely dietetic—diabetes, nephritis, gout, rheumatism, high calorie typhoid.

January—Fifth paper, "Nutritive Value of Food—Calorie Value of Food." Needs of body governed by age, sex, size, climate, occupation. Requirements of persons (employees) doing hard physical labor. Requirements of persons doing light work. Requirements of persons leading sedentary lives. Methods of determining calories for diets—1, of special cases; 2, of institution as a whole.

February—Sixth paper, "Theories of Diet—High Protein, Low Protein, Vegetable, Raw Food. Value of mixed diet. The inorganic food materials—1, water; 2, mineral salts. Changes which take place in food—1, during cooking; 2, during digestion.

March—Seventh paper, "Preparing Menus." Serving food. Relation of the commissary department to other departments in the institution. The kitchen. The serving rooms.

April—Eighth paper, "Differences in Food Problems Between Various Kinds of Hospitals." Municipal general hospitals; semi-private general hospitals, part pay and part free; special hospitals for insane, tuberculosis, defectives, convalescents; reformatories and prisons; homes for indigent and aged; orphan asylums.

A Vision of the Ideal Hospital.

Take one of our modern hospitals, with its up-to-date equipment for the study and care of the sick, with its expert medical staff, its corps of trained administrators, its training school for nurses, its social workers, its out-patient department, its equipment and staff for research work, and, in addition, humane conditions for its employees. In this hospital will be found an attractive living room for the men and maids. There will be a place where the young women employees may entertain their men friends.

There will be a welfare worker whose sole duty will be to teach and to study the comfort of the domestics. In this hospital the domestics will not have to seek the streets, the parks, and the public dance halls for their recreation. In this hospital every part of it can be opened to the public, and sanitary and attractive conditions will be found for all. There will also be a teacher of occupations for the convalescents and handicapped, so that those who enter the hospital may leave it with some new resources.

This hospital will be not only a teaching center within its walls, but it will carry on extension courses. Its medical staff will give health lessons in home nursing and sanitation; the dietitians will teach home cooking for the sick and for the well to those who need such instruction; its social workers will help unsnarl social problems for its

out-patients, and verily its influence shall be felt in the community as a blessing to all.

It will be an expensive hospital to run, because, although its administrators will not permit waste, they will see that, while administering charity, it does not exploit its own employees; and this ideal hospital shall be a health hospital such as benevolent persons shall rejoice in supporting.

ANONYMOUS.

An Obligation and an Opportunity.

War conditions in Europe have shut off the source of hospital supplies for our neighbors in Central and South America, and, to a considerable extent, Canada is similarly affected because she is young yet in manufacturing, and in the past has bought most of her hospital wares from the mother country and from Germany and France.

This means that shortly our country must supply the needed equipment for hospitals throughout all America. This is an obligation quite as much as an advantageous chance to extend our commerce. In fact, it is much more than merely an opportunity to promote our industrial interests, because, if the situation is properly met, there will result a broader influence of our hospital methods and practices on our neighbors and an interchange of ideas that should create a better understanding of those hospital and health problems in which we are mutually interested.

There are many fine hospitals south of our borders, and to the people of those countries as well as to ourselves this is an era of public health service, and the scientifically conducted hospital which is to care for and cure the sick of all peoples in the near future is found in Argentine, Brazil, Chile, Venezuela, Cuba, Colombia, and only in a lesser degree in all Latin America.

With the hospitals of Canada we are more familiar, and all of us recognize the advanced work being done by them, and we realize how much benefit has been derived from our contact with their administrative and medical staffs.

In the August issue of THE MODERN HOSPITAL was an article on the need of a Pan-American quarantine, and the subject is again mentioned in this number. This is only one of many health and hospital problems common to all the countries of this continent.

In the opinion of THE MODERN HOSPITAL the time is opportune for the American Hospital Association and for our other health organizations to broaden their influence by establishing closer relations with our Central and South American confreres just as we have done with Canada. Also, we believe it would be in the line of constructive patriotism, as well as good commercial development, for our manufacturers of hospital supplies and medical and scientific apparatus to make ready to serve the markets which will soon be calling for their aid. That these people are interested in our hospital methods is evidenced by the very considerable number of subscriptions sent to this journal during the past year from all of the countries in both North and South America.

Our September Cover Illustration.

Our cover for this month bears an illustration of the recently constructed contagious pavilion of the Evanston General Hospital at Evanston, Ill. An interesting description of this modernly arranged building, with carefully prepared diagrams of the floor plans, is printed in this issue, and will indicate to what extent efforts have been made to scientifically treat the various forms of contagious diseases.

Dr. Harry H. Hatcher has opened a hospital in Dayton, Ohio, for surgical and gynecological cases exclusively. The institution is located in a three-story brick building at 28 West Monument avenue, remodeled to adapt it to the purpose for which it is to be used and it is said that the equipment will be first-class.

Nurses doing private work in Spokane, Wash., are opposing the proposed state-wide eight-hour law. Mrs. M. V. Pitts, visiting nurse for the Metropolitan Life Insurance Company at Spokane, is quoted on the subject as follows: "An eight-hour rule may be all right with nurses in hospitals and institutions where they can maintain shifts, and nurses in this line of employment are believed to favor the measure. But with nurses who work in the homes it is different. They take a case and stay with it, and then will follow long intermissions when they do nothing. To compel nurses who work in the homes to work in eight-hour shifts means that people will not employ nurses, and that both the sick and the nurses will suffer in consequence."

Miss Emma L. Stowe has been appointed superintendent of nurses of the training school connected with the Elizabeth (N. J.) General Hospital and Dispensary. Miss Stowe is a graduate of the Boston City Hospital, was for a time employed as the head of the Rhode Island Hospital Training School and of the training school of the Maine General Hospital, and for nearly twelve years served as superintendent of nurses of the Connecticut Training School for Nurses. The nurses' home of the Elizabeth General Hospital is to be enlarged and many improvements made. The hospital, under the management of Miss Eugenia D. Ayers, the able superintendent, is rapidly outgrowing its present capacity, and it is said that a new building will soon be a necessity.

The problem of inadequate water pressure, said to have been long a menace at the Missouri State Hospital No. 2 at St. Joseph, has been solved by the construction of a reservoir, which will hold 500,000 gallons. This institution has also recently remodeled and enlarged its icehouse. The wood and mineral wool lining of the structure has been replaced with cement and cork. The building now houses a butcher shop, the dairying facilities of the hospital, all the vegetable store rooms, the ice manufacturing plant, and three large rooms are provided for the storing of fresh and canned fruits, etc. The ice plant has a capacity of 12,600 pounds daily. Two hundred and fifty to three hundred gallons of milk a day are received from the fine herd of Holsteins belonging to the hospital. The state owns 230 acres of land at St. Joseph, and the hospital is leasing 800 more, which are devoted to agricultural purposes.

MEETING OF THE AMERICAN HOSPITAL ASSOCIATION AT ST. PAUL, AUGUST 25-28.

The President's Address—Some of the Papers Presented—Other Papers Printed Elsewhere In This Issue—Additional Papers and Convention Report To Be Published in The October Issue.

The St. Paul Meeting.

While this number of THE MODERN HOSPITAL is still on the press the sixteenth annual conference of the American Hospital Association will be called to order by President Howell, and what now promises to be the greatest of all the conventions will be in session.

During the past year Dr. Howell and Dr. Boyce have performed wonders in arousing enthusiasm. They have done a prodigious amount of work, and THE MODERN HOSPITAL, out in the field in its own small way trying to help, has crossed and recrossed their well-worn trail up and down the highways and the byways of the hospital world.

Some very real progress has been made in this past year. The ideals of the association have been pushed far out, and have been impressed on hospital workers everywhere, and a strong uplifting influence has been felt all over the North American continent.

Some of the papers to be read before the St. Paul meeting, that THE MODERN HOSPITAL is to have the privilege of publishing, are evidence that the efforts of the officers of the association are to be ably seconded by participants in the program. The meeting is to be a great success.

President's Address.

BY DR. THOS. HOWELL, SUPERINTENDENT NEW YORK HOSPITAL, NEW YORK CITY.

Members of the American Hospital Association, Ladies and Gentlemen: At the Boston meeting it was voted to admit into the association as associate members hospital physicians, surgeons, pathologists, and superintendents of training schools for nurses. It affords me much pleasure to announce that a goodly number of these have availed themselves of the opportunity to become members. Their presence at these meetings will operate undoubtedly to bring about a spirit of helpful cooperation and to enlarge the sphere of the association's activities. This means increased efficiency for American hospitals. We now have, I believe, the largest and most influential hospital organization in the world. On behalf of the old members, I wish to extend a most cordial welcome to the new ones. We hope that they will take an active part in the discussions, for we feel that there is much to be learned from them.

I have heard the criticism made that our programs deal too largely with theoretical subjects, to the neglect of the practical, every-day ones. Originally, only superintendents were eligible to membership in the association, and the papers and discussions were strictly along the lines in which they were particularly interested; but, as the association grew and other hospital workers were invited to become members, it became necessary to arrange programs that would appeal to the various classes represented in the membership. The great American Hospital Association of today bears but slight resemblance to the little association of hospital superintendents of fifteen years ago, and it owes greater obligations to the public. It is no longer an association solely for superintendents, and I do not believe that many of us want it to be. We are proud of its development along broader lines.

As I view it, this association should deal with the broad, exceptional or involved problems, leaving the simpler and commoner subjects to smaller organizations, such as the Round Table of Boston, and the Hospital Conference of the city of New York. Undoubtedly there is a field for these small, informal associations, and I strongly urge superintendents throughout the country to thus get together in groups for mutual improvement through the interchange of ideas and experiences.

PLAN OF HOSPITAL ORGANIZATION.

At almost every meeting of the association there have come up for discussion, in one form or another, questions as to the best plan of organization for general hospitals. A number of excellent papers on this subject have been read and have elicited much discussion, but so far we, as a body, have taken no decisive action. This is a question which has many sides and angles, and one which deserves most careful study. New hospitals are being founded constantly and old ones are being reorganized, and their trustees and officers are asking, "What is the best plan of organization for us to adopt?" Unquestionably this association, representing trustees, physicians, superintendents, and directresses of nurses, is the one best qualified to give an authoritative answer to this question. It would appear that this is a matter that might well be referred to a committee for investigation and report.

GOVERNING COUNCIL PROPOSED.

The Committee on Development in 1908 recommended that the association should consider the practicability of conducting its business through a Council or House of Delegates. The desirability of making this change in our method of government becomes more apparent and urgent each successive year. The organization has grown rapidly of late, and has now reached a point in its growth where it has become unwieldy in respect to the conduct of its business meetings. Just as the town meeting is a satisfactory method for governing a village, but is too cumbersome to be employed when the village becomes a city, so with organizations like this—the time comes when primitive methods of government must give way to others more practicable and efficient, even if less democratic. The rank and file of the members attend the meetings to hear the papers and discussions, to extend their acquaintanceship, to visit institutions, and are not particularly interested in the purely business affairs. Would they not derive more benefit and satisfaction if they could refer the routine business matters to a representative council of their own choosing? This would render it possible to present better programs, as the business meetings now consume time that could be more profitably utilized. It was necessary this year to decline several excellent papers for the reason that no place could be found for them on the program. It would appear that such a council would insure the stability of the association by giving it a continuity of administration, which it now lacks because comparatively few persons attend the conventions regularly year after year and participate in the business routine. A study of the lists of those registering at the

various conferences shows that the attendance is influenced largely by the geographical location of the convention city. I would suggest that only those who are qualified by years of experience in the affairs of the association should be chosen as councilors. They should be elected, not appointed, and should serve for several years, with partial retirement each year.

INDIVIDUAL VERSUS CORPORATE MEMBERSHIP.

It has been suggested that the membership of the association should be composed of hospitals rather than of individuals representing hospitals. The inquiry which

DR. THOMAS HOWELL, PRESIDENT,
Superintendent New York Hospital, New York City.

suggests itself is whether any considerable number of the institutions not represented at present would unite with the association if the suggested change were made. Many hospitals now have from two to eight members in the association. Would the number of new members be sufficient to offset the loss of the old ones? It would appear that a hospital which is so small, or which lives its life so far apart from other institutions, that its superintendent at least is not interested in the association, is not likely to become interested in its corporate capacity. As to the expense of membership in attending meetings, is it at all probable that hospitals which are not represented at present would be likely to make such appropriations?

One objection to corporate membership is that it destroys any real test of fitness for membership. If a hospital can become a member, it follows that any person connected with it, no matter how unfitted to occupy the place, can become a component part of the association, with the right to office, to vote on important questions, and even to use the machinery of the organization for selfish purposes.

It may be stated, as a general rule, that we appreciate association membership which we gain by individual merit, and have little regard for honors and opportunities which come to us through outside influences. Taking everything into consideration, it would appear that it would be better to devise other means for increasing the membership of this organization. One way would be to make it so practical and useful that all institutional people would be compelled to recognize the desirability of becoming members.

FAVORS BUREAUS OF STANDARDS AND SUPPLIES.

Most of you have heard about the Hospital Bureau of Standards and Supplies of New York. This bureau is an association of hospitals and charitable institutions, maintained by annual dues. It was established under an agreement to which, at the present time, thirty-four institutions are parties. Having been in existence for over five years, it has passed the experimental stage and may be regarded as a success. The business of this association is transacted by an executive committee composed of hospital superintendents and a purchasing agent. The executive committee, which meets monthly, gives the purchasing agent such suggestions and advice as may be of assistance to him in preparing suitable specifications, and in negotiating advantageous agreements with dealers.

My purpose in mentioning the bureau is to call your attention to the fact that it is a success, and to advise that hospitals whose geographical location renders impracticable their affiliation with the present association should carefully investigate the question of cooperative purchasing with reference to the establishing of similar organizations in various sections of the country remote from New York. Such organizations will, I believe, prove not only profitable, but educative as well.

MR. H. E. WEBSTER, FIRST VICE-PRESIDENT,
Superintendent Royal Victoria Hospital, Montreal, Quebec.

PENSION SYSTEM FOR EMPLOYEES.

"How can we obtain more competent and permanent employees?" is a question that hospital officials frequently ask. To solve this problem is difficult. That hospitals do not pay their employees as generously as business houses pay theirs is well known, and this undoubtedly operates to the disadvantage of hospitals in securing suitable applicants for positions. Small wages, long hours, and little opportunity for advancement render hospital service unattractive to most persons, and the average employee does not hesitate to sever his connection with the institution at the first opportunity. This frequent shifting of

employees not only seriously handicaps the work of the hospital, but makes it doubly difficult for the permanent force, who, in addition to their own duties, must be continually training new people for the various positions. It is indeed fortunate that there are in every hospital a few fairly permanent employees, and it is their faithfulness that makes possible the operation of institutions. Without them there would be chaos. The trouble is that there are not enough of them.

In an endeavor to render hospital employment more attractive, and thereby secure a more permanent and efficient body of workers, the governors of the Society of the New York Hospital decided several months ago to establish a pension system in their institutions—the New York Hospital, the Bloomingdale Hospital for Mental Diseases, the House of Relief, and the Campbell Convalescent Cottages. The entire expense is borne by the society, the employees not being required to contribute to the pension fund. While several of the states provide old age pensions for their hospital employees, private hospitals have been reluctant to take up the matter, fearing that questions of legality might be raised, and that the expense entailed would be prohibitive. At the New York Hospital no legal obstacles were found, and the expense incurred is not excessive.

DR. H. A. BOYCE, SECRETARY,
Superintendent Kingston Hospital, Kingston, Ont.

The plan adopted provides pensions for employees who have reached the age of 65 years and who have been in the service of the hospital for fifteen years, for those who have reached 60 years of age and have been in the service twenty years, for those who have reached 55 years of age and have been in the service for twenty-five years, and for those who have completed thirty years of service, regardless of age. It is provided that the minimum amount to be paid as a pension shall be $15 a month and the maximum $125 a month. The pension allowance for any employee to whom a pension is allowed on account of age or length of service is as follows: for each year of service an allowance of 1 percent of the average monthly pay received for the five years preceding retirement. To illustrate, an employee in the service for thirty years and receiving an average salary of $100 per month for five years preceding retirement would be entitled to 30 percent of $100, or $30 a month.

CONTINUOUS STAFF SERVICE.

The function of a hospital is generally admitted to be fourfold—the expert care of patients, the teaching of medicine to physicians and medical students, the advancement of medical knowledge, and the training of nurses. Most American hospitals were founded for the purpose of caring for the sick and injured, and not until recent years has there been any general appreciation of their educational responsibilities. Hospital authorities, in the past, assumed that if they provided liberally for the care of the sick, they had discharged their obligations to the community. Conditions have changed gradually, and many trustees now recognize that the educational function of hospitals is a most important one; in fact, only secondary to that of caring for the sick.

One factor which has contributed largely to the lowering of the scientific and educational standards of hospitals is that the attending physicians have been, through no fault of theirs, dilettantes in hospital work. They have given comparatively little time to it. They have been on duty in the hospital for only two or three months annually, and the remainder of their time they have devoted to their outside practice. Naturally, then, on returning to their hospital duties after an absence of nine or ten months they have found themselves unfamiliar with the development of modern hospital methods. It has been impossible with interrupted services for them to thoroughly qualify themselves as hospital physicians or as teachers of clinical medicine. It is the recognition of this deplorable condition which has influenced a number of hospital boards to provide continuous services for their attending staffs. In many other hospitals this question of continuous service is being discussed earnestly; and it seems safe to predict that eventually a majority of hospitals, especially those in the larger cities, will adopt this plan and thereby increase their scientific and educational productiveness.

MR. ASA BACON, TREASURER,
Superintendent Presbyterian Hospital, Chicago, Ill.

It is now quite generally conceded that no physician

who is not in constant touch with hospital work can hope to reach the highest rank in his profession; and the time will soon come, if indeed it is not already here, when it will be a generally accepted belief that no hospital which adheres to the old plan of rotating service can hope to attain a commanding position in the hospital field. In changing over from rotating to continuous service, some temporary sacrifice on the part of members of the attending staff will be inevitable. But by exercising a little ingenuity in arranging the services and in making the assignments, this can be reduced to a minimum, and in the end the patients, the hospital, and the staff will be benefited by the change. The patients, not having frequent changes of physicians, will receive better care, there will be more scientific medical work done, and the educational output will be of a much higher order. Hospitals will be held in higher esteem and will be better supported. This may appear to be a mercenary view to take, but it is nevertheless the correct one, as is evidenced by the splendid support given to those hospitals holding high rank as scientific and educational institutions.

The following is an incomplete list of American and Canadian hospitals which have continuous service: Columbia Hospital, Pittsburgh, Pa.; University Hospital, German Hospital, Medico-Chirurgical Hospital, Hahnemann Hospital, Women's College Hospital, Samaritan Hospital, Jefferson Hospital, Philadelphia, Pa.; St. Luke's Hospital, New York Hospital, Roosevelt Hospital, Bellevue Hospital, Presbyterian Hospital, New York, N. Y.; Massachusetts General Hospital, Massachusetts Homeopathic Hospital, Peter Bent Brigham Hospital, Carney Hospital, Children's Hospital, Boston, Mass.; St. Vincent's Hospital, Worcester, Mass.; St. Mary's Hospital, Rochester, Minn.; City Hospital, Minneapolis, Minn.; City and County Hospital, St. Paul, Minn.; Lakeside Hospital, Cleveland, Ohio; Royal Victoria Hospital, Montreal General Hospital, Montreal, Canada; Toronto General Hospital, St. Michael's Hospital, Western Hospital, Toronto, Canada; St. Margaret's Hospital, Bethany Hospital, Kansas City, Kan.; St. Joseph's Hospital, Swedish Hospital, German Hospital, Mercy Hospital, St. Luke's Hospital, Kansas City General Hospital, Kansas City, Mo.; Iowa Methodist Hospital, Mercy Hospital, Des Moines, Iowa; Clarkson Hospital, Omaha General Hospital, Presbyterian Hospital, Wise Memorial Hospital, Methodist Hospital, Omaha, Neb.; Johns Hopkins Hospital, Baltimore, Md.; Charity Hospital, Touro Infirmary, New Orleans, La.; Harper Hospital, Detroit, Mich.; Washington University Hospital, St. Luke's Hospital, Jewish Hospital, St. John's Hospital, St. Louis Mullanphy Hospital, St. Mary's Hospital, Missouri Baptist Sanitarium, Alexian Brothers' Hospital, St. Louis, Mo.; Kingston General Hospital, Kingston, Canada.

MORE AUTOPSIES NEEDED.

There is another important matter, also coupled with the question of education, to which I desire to direct your attention. I refer to the question of autopsies. The physicians of the United States are today seriously handicapped in their clinical work by lack of opportunity to study pathological anatomy. They have nothing like the opportunities in this respect that the physicians of Canada, Germany, and England enjoy. Statistics compiled by the Public Health, Hospital, and Budget Committee of the New York Academy of Medicine show that of patients dying in seventeen leading American hospitals, post-mortem examinations were made on less than 20 percent, while three Canadian hospitals reported 67 percent; five English hospitals 78 percent, and eight German hospitals 89 percent as coming to autopsy.

The expert care of the sick depends primarily on the last refinements of the science and art of diagnosis. Without this, therapeutics is simply meddling. It is absolutely impossible for even the best trained internist to maintain a high plane of diagnostic medicine without the final test of autopsy on those cases that die. It is natural and proved by experience that, without this spur, physicians will settle back into slovenly technic and loose processes of thought. What is the meaning, if not this, of the statistics collected by a Boston physician who noted that a malady not difficult to recognize escaped detection eight times out of ten? And this is but one of his many embarrassing disclosures. No hospital can be sure that it is even efficient as a hospital without the constant stimulus to its physicians of numerous post-mortem examinations. In no less degree is the autopsy theater a necessity to the student. Grounded in theory by precept, trained at the bedside by experience in the wards, he carries away with him no single complete or permanent mental picture unless he has seen and handled organs from a like case in the post-mortem room. Without this first-hand knowledge his art and his science are pure theory; he does not really comprehend the disease.

It must not be forgotten that of medical students the majority will go into practice with a certain stock in trade in the way of knowledge, to which but small addition will be made in the routine of general practice. If their knowledge is to mean anything, they must be well grounded in the principles of medicine founded on morbid anatomy. To those students who elect to train themselves as teachers, specialists, or investigators, at present in American hospitals we offer comparatively little opportunity. As things stand today, we are not able in American hospitals to train an expert clinician who would rank with the head of a German hospital. This is true mainly because he would find here no adequacy of autopsy material to give him the needed experience as a pathologist. Of the present-day Americans who have established reputations in internal medicine, almost every one has been forced to go to Europe for pathology. What is true of the clinicians is even more true of the pathologists—they all must of necessity go to large European cities to find the material for their training.

The members of this association can, if they will, be of great assistance in improving these present conditions. It is our duty to educate hospital trustees, legislators, undertakers, and the community as to the desirability of holding autopsies. Only when we are thus thoroughly interested and working together for the common end may we expect to see the removal of this serious obstacle to the proper development of our medical education.

REASONS FOR INCREASED EXPENDITURES.

There are those who assert that this association has failed in its avowed mission—"the promotion of economy and efficiency in hospital management." To support their assertions, these critics point to the increasing expenditures of hospitals during recent years. They ignore the fact that the cost of every kind of enterprise—commercial, philanthropic, and religious—has largely increased, and they apparently do not appreciate how much more is done now by hospitals for their patients than was done ten or fifteen years ago. Fifteen years ago the use of the x-ray as a means of diagnosis was in its infancy; the social service department had not been instituted; nurses were too few; there were not enough interns to attend properly to the clinical work; there were no trained dietitians; very little laboratory work was attempted; and in many instances the business management was so inferior that

hospitals were looked on by patients with much distrust and by business men with mild derision.

As to the increased cost of commodities with which hospitals today have to contend, I find, on comparing average prices of 1913 with those of 1906, the following percentage increases: meats, 48 percent; poultry, 21 percent; butter, 38 percent; milk, 48 percent; cream, 45 percent; absorbent gauze, 22 percent; and coffee, 42 percent. In the face of these facts, I ask, can anyone successfully maintain that we are not doing much more for our patients and for the community than we were a decade ago, or that we are not paying greatly increased prices?

To complete our case, let us now compare the per-capita costs of ten years ago with those of today. In 1903 the average daily per-capita cost of fourteen of the representative hospitals of the country was $2.14 as compared with $2.47 in 1913. This is an increase of less than 16 percent, and it is very much less than the average percentage of increase in the cost of everything which is comprised within the range of hospital business. I think contributors to hospitals have reason to be pleased with the results which have been obtained with their money in recent years.

The American Hospital Association is not soliciting flattering commendation, nor is it resenting frank and deserved criticism, but it feels justified in claiming no small share in the achievement of these satisfactory results by disseminating throughout the length and breadth of the land information and advice which have helped so materially in improving institutional conditions, and with such an insignificant increase in per-capita costs.

California and the Eight-Hour Law.[1]

BY ANNE A. WILLIAMSON, R. N., SUPERINTENDENT OF NURSES, CALIFORNIA HOSPITAL, LOS ANGELES, CAL.

On the statute books of California has been placed a law which presents the most serious problem that has ever confronted the American training schools for nurses, stubbornly fought from the time of its conception down to the final scenes. When its advocates gained the victory by the signing by Governor Hiram Johnson, it gained in notoriety and strength—as a snowball gains as it is rolled about—until now it is pointed to by the would-be reformers as a monument to the chivalry and the generosity of the people of California. The history of this famous law we may know, the administration of the law we may know, but what it will do for the pupil nurse, and what it will mean to the graduate nurse who receives her training under such a handicap as this law provides, only time will tell.

California seems to believe that this so-called eight-hour day, which is really seven hours six days in the week and six hours one day in the week, has come to stay. It is the first state to put its hospitals and its professions under the sway of the labor organization, but, if I read the times aright, it will not be the last. Organized labor is reaching its tentacles in every direction and drawing under its mighty wings any too weak to withstand its unreasoning but terrible ambition. Let other states beware and be prepared to do battle for the uplifting of the nurse, bidding their lawmakers to keep their hands off professional education.

In the year 1911 a bill was passed in the California Legislature which was known as the "Eight-Hour Law for Women." This bill, which in the course of time became a law, limited the working hours of women employed in any mercantile, mechanical, or manufacturing establishment, laundry, hotel, or restaurant, or telegraph or telephone establishment or office, to eight hours a day for six days in the week. At first the feeling among these different establishments was one of consternation, as it meant so much readjusting of hours and in many instances the substitution of men in the places where women had been employed. But the American is resourceful, and in most instances the matter was worked out to the satisfaction of the employer and the patron, although not always to the satisfaction of the employee.

To the latter class, which the eager Legislature had striven to benefit, it in many instances worked a hardship, doing away with the weekly half-holiday which many firms were finding it possible to allow during the hot weather, and forbidding all overtime work of which many a woman has been glad to avail herself in order to bridge over a hard place, illness at home, some longed-for luxury, or perhaps the wherewith for a real vacation trip, putting these features entirely out of the question when the regular weekly salary was all that could be considered.

But the minor difficulties were ignored; the bill had passed and must be enforced. Department stores rearranged their hours, restaurants employed more men and fewer women, laundries abolished their early closing days, the high cost of living was made still higher, and not much disturbance was caused by the new regime.

Then the advocates of the new measure grew bolder and dared bigger things. Early in the year 1912 the first indications of the intentions of the labor party were seen in the form of communications to the different nursing organizations in regard to the proposed amendment to the law already on the statute books. The main change that was sought was to include nurses in the eight-hour law, and the representatives of the state association were asked to give their opinion in the matter. On January 23, 1912, this came before the regular meeting of the council and the following resolution was passed: "Resolved, that the California State Nurses' Association do not indorse a bill including nurses under the eight-hour law for women." About that time the several county associations were approached with the same question, and, while answers were sent, it must be confessed that at the time the proposition seemed so absurd and so unworthy of any consideration by a body of professional women that scant attention was given it.

But steadily on came the tide, and while the year was yet young the intentions of the advocates of the eight-hour law were all too apparent, but not until early in the spring, and after the proposed bill had been given a great deal of newspaper notoriety, did the hospital authorities wake up to the fact that the bill was fast winning its way into favor, and was sure of passage through both houses and of the governor's signature. It was then too late to do much; meetings were held and resolutions passed and protests sent to Sacramento, now the seat of war. but the hospitals were not organized, and the nurses' associations in the state could not be made to take sufficient interest in the matter, and they were not well versed in legislative work, which calls for experience.

The bill, as originally drawn, included all nurses, but it was argued that the graduate nurse had the same status as a physician, and that to put her under the law would be both a hardship and an injustice. While the bill was still in committee a public hearing was announced, and several hospitals as well as nursing organizations sent representatives to speak before the committee. Great was the excitement all over the state the night set for the hearing and all who could be present were there, the large assembly chamber of California's capitol being crowded

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

with interested listeners. Many nurses were able to speak on that occasion, but the discussion was chiefly between a superintendent from one of the northern hospitals and a newspaper woman working in the interest of the bill. Many good points were brought out by both sides, but popular opinion was in favor of the bill, and the newspapers all over the state came out the following morning with large headlines and glowing accounts of the great humane measure before the Legislature; so no one was surprised when a few days later the bill was reported favorably out of committee, with recommendation that it pass.

Time went on, and the bill gained in favor and was set for a special order for a certain Tuesday. In response to a telegram sent to Los Angeles from those opposed to the bill, the writer went to Sacramento to help during those last days. I found things much as I expected they would be from the newspaper accounts, except that the feeling was stronger in favor of the bill than we had thought possible. Strange tales had been told of hardships and injustice in some training schools—conditions that may have existed and may not, but the telling of which had its effect on ears always ready to listen to the sensational. One argument brought forward was that one training school had been known to require a service of thirty hours in one day, but when pressed for an explanation the speaker beat a hasty retreat. It was also stated that many schools were already under the eight-hour law, which proved how little the legislators knew about the subject in hand. No hospital in the United States—or, for that matter, in the civilized world—has ever been confronted with the eight-hour law for six days in the week.

The eight-hour system in effect in several of the hospitals provides for a continual service seven days in the week, and is managed by three shifts of nurses, who relieve each other at stated intervals. The eight-hour law allows for a service of eight hours a day for six days in the week, or six and six-sevenths hours a day for seven days in the week, and it may be readily seen that three shifts of nurses will not cover a service of twenty-four hours in the day for seven days in the week, but relieving nurses must be provided to supply the lapses that will occur as a result of such an awkward arrangement of time.

The eight-hour system allows for a service of fifty-six hours in the week, which is understood to mean eight hours in one day, but it is sufficiently elastic to permit of longer service in one day in case of emergency, to be counterbalanced by shorter hours the following day. It provides for seven days in each week, a provision that is imperative for those who have to deal with the sick and injured, for a hospital may not close its doors night or day, Sundays, or holidays.

Perhaps the description of the passage of the bill by the Senate can best be given by quoting from a San Francisco newspaper.

NURSES WIN FIRST BATTLE FOR EIGHT HOURS—SENATE PASSES BILL AND SCENE OF CONFLICT NOW SHIFTS TO LOWER HOUSE.

Sacramento, May 1.—The fight for an eight-hour day for pupil nurses, which started on the floor of the Senate yesterday morning at 10 o'clock, came to the victorious conclusion at midnight, sandwiched in between layers of the nonsale of duck bill and impeded in its progress by every tactic known to the reactionary politician; the bill finally passed with a vote of thirty-two ayes and no noes. The senators who led the determined opposition came under the wire at the last minute after they had exhausted every possible means of excluding pupil nurses from the bill.

Senator Henry Lyon, who fathered and championed Senate bill 466, reviewed the situation in the hospitals in the state, pointing out the long hours of labor required of pupil nurses, the money earned by them for their institutions, and the pittance barely large enough to cover the cost of uniforms and books paid to them. He urged the speedy passage of the bill, but was blocked at the outset by an amendment which was offered exempting hospitals from the operation of the law. From that time the fight centered on the amendment.

This spirited introduction was followed by one of the northern senators, who read several letters from prominent people, which were declared to prove conclusively that if there is any class of young women engaged in any vocation who need the protection of the eight-hour law, it is the pupil nurse. He based his assertion on the requirements of health, education, public safety, and humanitarianism, and wound up by asking if California, which leads the vanguard in humanitarian legislation, should deny to the pupil nurses the privileges they accord to other women.

Senator Caminetti entered the fight early in behalf of the nurses, and he stayed by it to the close, making vigorous objections to all the amendments offered. He begged that eight-hour legislation be backed by every man who has the cause of humanity at heart. "We took a great step forward two years ago when we passed the eight-hour law," he said, "and I don't know a man who fought against it at that time who would change it now. We cannot go backward. We must go forward. Our parties have pledged themselves to the uplifting of humanity—it was the slogan of our last campaign, and there can be no better example of putting it into practice than by passing this bill by an almost unanimous vote."

In the evening, when the argument against the amendment had become so involved that, as one senator put it, they were afraid they would put the ducks in the hospital and have an open season on nurses, Senator Caminetti again championed the bill, introducing statistics from physicians showing the detriment of overwork, and drew a clear analogy in its application to the measure at issue. Notwithstanding the avalanche of telegrams which descended on the senators' desks and the Niagara flow of eloquence turned loose, all the amendments were voted down and the bill passed. The senate chambers and galleries were crowded all day with women interested in the passage of the bill and many of the wives of the assemblymen, some of whom have been nurses, stayed until the last gun was fired.

About two weeks after the bill passed the Senate it reached the floor of the Assembly, and after much argument and an all-day session, continuing until after 2 a. m., it finally passed and was sent to the governor. Even then the training school authorities did not give up. Letters were written to the governor, and representatives were sent to Sacramento to be present at the hearing that he gave on all important bills before signing them. It was curious to note that not one nurse was present at that hearing who went in the interest of the bill. The only persons supporting the bill were a representative labor leader and a newspaper woman who had worked for the bill under the direction of the labor party. The opposing side was well represented by nurses prominent in training school work in California.

The bill was signed June 14th, 1913. The famous eight-hour bill was now a law, and as such it would be enforced. There was no precedent to guide us, a change from the eight-hour system to the eight-hour law being equally as difficult as a change from the old system to the eight-hour law, and it would take generalship to accomplish it. It was a peculiarity of the existing conditions that no one was ready to come forward with a working plan. The press called loudly for ideas on the subject, but the people whose opinion was of any value were silent. Meetings were held in different parts of the state and the superintendents of the training schools invited, and, while these meetings were well attended, the superintendents would not talk. Even at the meeting of the State Nurses' Association, where the subject was forced to the front,

the superintendents, as if by common consent, still remained silent. No one would give an opinion on an untried measure, and each seemed more than willing that her neighbor and fellow-sufferer should work out her own salvation; and as August 10, the day set for the law to go into effect, drew nearer and nearer, one school was quite ignorant as to the manner in which the other schools would comply with the law. August 10 fell on Sunday, and Saturday night the ever-ready reporter was on hand to secure a little news for the Sunday paper in regard to the hospital service under the new law. Most of the heads of the training schools were either off duty or inaccessible, so what meager information was obtained was gathered from the pupils, who were fully as curious and quite as ignorant on the subject as the reporter himself.

The arrangement of the schedule for the training school which I represent occupied many weeks—in fact, as I sat in the Legislature while the routine business was being taken up, I always had a paper and pencil and filled in the tedious hours making out a working plan.

There were two methods from which to choose. One was eight hours work a day, with one day off duty during the week, and this was the intention of the advocates of the bill when it was first introduced, it being a combination of the old law of one day in seven rest and the eight-hour law passed in 1911. The other method was the division of the forty-eight hours among the seven days in the week, so that each nurse is on duty some hours each day. Most of the large training schools adopted the latter plan as the lesser of the two evils. This gives seven hours of duty for six days in the week and six hours of duty for one day in the week, an awkward number with which to reckon, as twenty-four is not divisible by seven in any way, and three shifts of nurses will not handle any one department unless the patients could be left entirely alone for the three odd hours. However, law is law, and with even this intricate problem before them the superintendents went to work with what courage they could muster, determined to produce results which must be as satisfactory as possible to the patient, the doctor, the hospital, and the pupil herself. The class hours must be taken into consideration, the meal hours must be respected, and the change that comes in the middle of the night must be at an hour that will work the least hardship to anyone.

With the first method the full number of nurses required to care for the patients must be supplied plus a relieving nurse for every six nurses, as each nurse must be off duty one entire day during the week and likewise the relieving nurse. With the second method a most elaborate schedule of each nurse's time must be worked out, with the allowance for her meals and her classes, and with as much consideration for the patients as such a handicap would permit.

Having had no experience with the first method, I am not in a position to give an opinion, but those training schools that have tried it seem to be fairly well satisfied with results. It has its weak points in the fact that it gives too much time to the pupil, when she is responsible for nothing, taking her entirely away from her work for one whole day, causing her to lose interest in her patients, for a great deal can happen in a day, and neither sickness, accident, nor the throes of maternity stop on Saturday night. As this method is entirely new in the nursing world, perhaps the superintendents of nurses would be interested to know more definitely just how it works out. Take, for example, one corridor containing perhaps seven or eight general patients. Two nurses will come on duty at 7 a. m., one working from 7 a. m. to 12:30 p. m., and from 5 to 7 p. m., the other from 7 a. m. to 2:30 p. m. A third nurse will come on duty at 9 a. m., working until 4:30 p. m., and should a fourth be required, she will report at 11 a. m., working until 7 p. m. The first night nurse reports at 4:30 p. m., working until 12 midnight, when the second reports at 12 midnight, staying until 7 a. m. These hours, as they are arranged, include one-half hour for each meal, the nurse not being allowed to return to duty until it has elapsed. On one day in the week one hour must be subtracted from each nurse's time, so that the hours of duty will not total more than forty-eight hours for the week. It will be seen that five nurses are required to care for eight patients instead of three as heretofore, and the patient must have at least four different nurses looking after him besides the head nurse and her senior.

In the operating room a continuous service is arranged up to midnight, with much the same schedule of hours as on the corridors, and, if there are emergency operations between the hours of 12 midnight and 7 a. m., the nurses who work from 4:30 p. m. until midnight are called for those operations, it being another day and date, and the time is subtracted from the regular hours of the succeeding service. There are no half days given and no vacations.

From the hospital's point of view, there is little to be said. There is a larger pay roll, as more nurses are required to supplement the work of the pupils. There is a larger staff to house, and running expenses increase, which is offset in the private institutions by an increase in the rates, and in the endowed institutions by a decrease in the charitable work that may be done, for the care of a patient necessarily costs much more now than heretofore. The increased mental burden falls on the hospital management. The decreased training is the unfortunate lot of the pupil nurse, while the increased expense falls on the taxpayer in the public institution and the self-respecting patient himself in the private hospital.

Some hospitals have abolished the training schools, which perhaps is not such a calamity in several instances, but others have been obliged to give up their affiliations, which is a detriment to many training schools, for, with only enough pupils to care for the hospital patients, they cannot be spared to go to other institutions, and this difficulty will not be overcome for several years until the training schools are large enough to meet these increased demands.

To the patient the constant change of nurses is more or less annoying, and many, to avoid this, resort to the only alternative of having a special nurse, whether they can afford it or not. This, of course, takes the needed experience away from the pupil nurse.

Quoting again from a San Francisco daily paper will show a condition where the operation of the law has a direct result on the hospital and its patients, contracting to a great extent the work that may be done and robbing the pupil of her practical instruction in contagious work, which is so difficult to obtain. The writer says:

As a direct result of the eight-hour law for women in its application to hospital nurses, the Children's Hospital has been forced to close the doors of its $51,000 contagious pavilion, which was recently completed, and which is the finest and best equipped building of its character in the West.

The announcement of the closing of this department was made by Mrs. John F. Merrill, president of the institution, at a meeting of the board of managers of the hospital, and the reason given was that the hospital could not afford to employ the necessary graduate nurses for its maintenance under the new law, and did not have suffi-

cient student nurses in its training school to carry on the work of attending contagious cases.

That the general public, and especially the poorer classes, who are dependent upon the charity of such institutions as the Children's Hospital for the care of their sick, will be the chief sufferers from this action, was the statement of Miss M. S. Wilson, superintendent of nurses of the hospital, when seen yesterday morning, in an interview authorized by the president.

Miss Wilson, who also deplores the state of affairs whereby the student nurses will lose an important branch of their training, said:

"The forced closing of the contagious pavilion is illustrative of the ill effects of this new law and of the harm which it can accomplish. The hospital has attempted to operate this department, but from the beginning it was apparent that it would prove impracticable under the conditions imposed. Each case, according to the law, required the services of four nurses, and these nurses, owing to the nature of the cases being treated, were absolutely precluded from any other duties, and were constantly in quarantine with the patient. The hospital has but forty-eight student nurses at the present time, and is even hampered in the other departments, which require seventy or more students in the care of patients. The hospital cannot financially afford to place graduate nurses on these cases, and, even if it could, there are not sufficient graduates available to supply the needs of the institution. It has been the custom of the hospitals to intrust these cases only to nurses who are in the last eighteen months of their training, as the nurses in the first half of the course are considered to be only in the preparatory stages of their work, and not suited for the care of contagious diseases. This branch of nursing should by all means be done by student nurses, and, as this is now impossible, they are losing one of the most important parts of their training. Nurses cannot learn without practical demonstration, and to be competent to practice their profession after they have graduated they must have instruction in the care of contagious cases as well as any other branch of the work.

"A distressing phase of the situation at the Children's Hospital since it became necessary to close down the contagious pavilion, arose last week, when the institution was forced to turn away a case of diphtheria. This is the first time in the history of the hospital that a suffering child has been refused admittance, and the board of managers has always prided itself on the fact that any sick child, irrespective of color, creed, or nationality, was welcome to the care of the institution, no matter how poor or rich the parents might be. A contagious pavilion has for years been maintained by the hospital, and the enforced closing of this branch of the institution will work untold hardship on the poor of this and surrounding cities who, for obvious reasons, are unable to care for their children when contagion arises."

But to the pupil nurses, the ones for whom the law was made, comes the greatest hardship. Could the eight-hour system, fifty-six hours per week, have been given them by law, with an allowance of a certain number of weeks of special work, with private patients, the conditions would have been arranged to the satisfaction of every right-minded superintendent in the state. Young women enter the training school with the understanding that it is hard work, and they know it is a life of self-sacrifice, but anything worth while comes hard, and no educational institution can be handled on a satisfactory basis that is limited in the hours that it may allow for its experience. Seven hours a day does not give any nurse enough insight into a case to become interested, and the grand principles Florence Nightingale tried to instill into the minds of her followers have resolved themselves into the labor principles of putting in time. Young women entering the training schools have few resources. They have little money for amusements away from the hospital. To be sure, there is the class work, but that cannot be used to fill up all the waking hours, and, sad but true, the moving picture shows and other like cheap places of amusement furnish a place where time may be killed. Another fact is, there is so much time to do everything that nothing is done on time. Meals are not attended, nurses not of a very energetic turn of mind will spend the greater part of the time off duty, in bed, sleeping away the precious hours that can never return. There is a great temptation to leave many things undone. The nurse lacking in principle will not finish her work if she has the habit of slighting, the nurse who follows her may do it if she sees fit or pass it on, knowing that the head nurse may not call her back, as that would be working overtime.

During her training, under this new law, it is a misdemeanor, punishable in some institutions by dismissal from the school, for the nurse to stay five minutes longer on duty than her prescribed time. Every hospital is responsible for each nurse in training, and consequently the most rigid surveillance is necessary, because any deviation from the law will be reported and dealt with by the labor inspectors and the courts. How can a woman, who for the period of her training has been under this labor law, on her graduation, blossom forth as a self-sacrificing professional nurse? Her principles and her ideas cannot be the same if trained under this forty-eight hours per week law as they would be if she had been trained under different conditions. The long hours demanded of the graduate nurse will not appeal to the woman whose going and coming has been prescribed by law. She will be restless and uneasy, with little interest and enthusiasm in her work, and most likely will break down with her first hard case, as she has not been trained to endure.

As the law applies to all women in hospitals except the graduate nurse, the housekeeper, dietitian, and the woman intern must come under it. The first two mentioned can arrange their work by adding to the duties of the already overburdened superintendent, and little confusion results, but the woman intern finds the matter particularly hard. She has come to the hospital at a great financial sacrifice to gain all the experience she can in one year; she receives no salary for her work, but, if unhampered, obtains experience which money cannot buy. Her hours have never been counted before, she was privileged to do as she pleased, and, as all hospitals know, her responsibilities are particularly heavy at night, when sleepy doctors do not care to have their slumbers disturbed or be obliged to leave their comfortable beds at night if the emergency is one which the intern can handle until morning. Sad and ludicrous would be the situation if the intern, on being called, should announce the fact that she had worked her eight hours that day and dared not get up.

Perhaps no phase of the nursing situation has brought forward more bitter criticism during the campaign for the eight-hour law than the subject of special nursing, and not only in this state, but all over the country, it is a subject widely discussed and much abused. Four-fifths of our nurses graduating from training schools enter the field of private nursing; the other fifth accept institutional positions. The hospital which gives its pupils no experience in executive work is the object of much censure by the nursing organizations, as they are not doing their duty by their nurses in fitting them to take up the different lines of the work open to the graduate nurse. How much more necessary is the training in special nursing to the young graduate!

Special nursing can be learned only by experience, and that experience should be given to the nurse before her graduation. She may attend lectures in ethics by the dozen, but, unless she has actual experience, she knows nothing of the intricacies of private nursing until she has been shut up in a room with one patient whom she must

make comfortable and happy. How much better to give to the pupil that experience while she has the help and the guidance of her head nurse and her superintendent, than to make her first six months out of the hospital her probationary period of private nursing.

In California the very character of the hospitals makes special nursing for the pupil imperative if she is to be at all well trained in her profession. We have no endowed hospitals, and few charity or ward patients save in our county hospitals. All patients who undergo serious operations demand the services of a special nurse, thus leaving for the pupil only convalescent patients to care for. A nurse during her entire training, under the present law limiting her time on duty to seven hours a day or six hours a day, may never have the opportunity to care for a serious operative case, or a very sick medical case. The patient must have a special nurse, and the graduate nurse is called just as the patient was getting instructive and interesting.

A young woman gives up three of the best years of her life to learning her profession, and it is unjust to her to deprive her of the work to which she is entitled. Take the matter of maternity work, and, unless a pupil may have at least one case all her own, she is poorly equipped to go out to the private home as the doctor's sole assistant and "make good" on her first case.

In all hospitals the obstetrical work is so directed that each nurse has a certain number of weeks in each branch of the work. She will care for the mothers for a certain length of time and for the babies for a certain length of time. She will take her turn in the delivery room and on night duty, but not until she has a special patient will she be able to form any idea of how to proceed from start to finish with a maternity patient. It is not fair to the public nor to the nurse to deprive her of this valuable part of her training because the law of our state says so long may she work and no longer.

In executive work, which most of the training schools have added to the third year work, the pupil finds herself seriously hampered. It is exceedingly difficult to turn responsibility over to anyone who must measure her work by hours and minutes. She should be free and unhampered in every way as regards to time, as results must be produced—not a certain amount of time put in.

It has been the custom to place the third-year nurses in each department as assistant to the head nurse, where they may be taught executive work, where they will have the opportunity of working with the head nurse and sharing some of her responsibility, and relieving her in her absence, but with a limited service of seven hours a day this work must be greatly curtailed or done away with altogether.

Those who oppose this law are the true friends of the pupil nurse. All hospitals should adopt the eight-hour system, with six months of the three-year course to be devoted as may be desired to special nursing, so that our graduates will go out into the world well prepared for the great responsibilities that will devolve on them. To do this we do not want laws instigated and enforced by labor agitators, but such regulations should be left to our state nurses' association and to the inspectors of our training schools, who are graduate nurses and appointed by the State Board of Health.

Nursing is a profession which belongs exclusively to women, and, as was said at that wonderful meeting of the American Nurses' Association in Chicago in 1912, nursing is peculiarly woman's sphere. It calls for the highest in character and education, and it cannot succeed without perseverance, determination, and self-sacrifice. But how can we instill those principles into the minds of our pupils when the first lesson we must teach is self-centered—the eight-hour law. How can we at the command of the law turn against those first principles that our patients' comfort is first—our own, second?

Real nursing, self-sacrificing service, cannot be timed by the clock. It never has been, and it never will be. Soldiers going into battle are not called to retreat because time is up, and neither should those soldiers who are fighting disease and death be told to lay down their arms and steal away because a certain hour has arrived.

Surely our Legislature, in passing a law which is such a handicap to the education of the nurse, was not looking to the reputation of the state. How do they think it possible for women trained in California to compare favorably with nurses from other states where no such menace to education exists? Surely it is a far cry from "The Lady with the Lamp" down to the present time, where the law reduces pupil nurses to the level of the poorest paid worker in the field of labor, doing away with all zeal and interest in the work, robbing it of what little romance it had, and which discourages faithfulness and unselfish devotion to one's duty, and which puts no premium on fidelity.

The Hospital Family—Cooperation in Domestic Management.[1]

BY NINA DALE, R. N., SUPERINTENDENT THE GERMAN HOSPITAL, CHICAGO.

Mr. Chairman and Fellow-Members of the American Hospital Association, Ladies and Gentleman: I am honored by a request to appear before you to discuss in a general way the "Hospital Family" from the standpoint of cooperation in domestic management. Before we proceed to the subject in hand, let us agree on the personnel of the hospital family. It has been suggested that membership in the hospital family shall be restricted to such persons as actually reside within the hospital or its premises. This seems to me to be incomplete inasmuch as it omits at least two of the most important essential factors in the successful management of a hospital—namely, the board of directors and the medical staff, who, of course, are nonresident, but who in my opinion form an integral part of what we have chosen to designate under the title of "The Hospital Family."

In most well-regulated families, you will agree, the father is the recognized head and guide in all matters affecting the general welfare, and this by virtue of his assuming the burden of the support of the family. And so do we look to our boards of directors for guidance in our general policy, and especially for relief in our financial problems, which, we all regret, are still the most embarrassing that confront us. We might also mention here that, as father's activities should be limited to affairs external, so would the best interests of the hospital demand that the board exclude themselves from our domestic affairs.

To whom shall we assign the maternal duties in our hospital household? It seems to me that these fall naturally to the superintendent and his or her immediate assistants. It is the superintendent who is responsible for the orderly and efficient conduct of the hospital. The daily domestic routine of provisioning with wholesome and palatable food, overseeing its proper preparation, and its attractive serving to the nurses as well as to the

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

patients, and guided throughout by consistent and well-directed economy; the almost daily adjustments of complaints from patients; the rectifying of misunderstandings and differences between heads of various departments, or between doctors and nurses—in these respects, as well as in many others that we might mention, the routine of the average superintendent may be correctly compared with that of the average mother. But these are merely unimportant details as against the superintendent's relationship to the patients in the hospital. It is they who constitute the children in our hospital family; it is for their comfort and benefit that we are all striving; they are the most important phase of our "hospital family," as children are in our social family. In fact, they are the only reason for our existence, and whatever efforts our boards of directors, our superintendents, our doctors, and nurses devote to the welfare of the hospital should be directed primarily from the view point of the patients' welfare.

We will agree that the ideal family is the one wherein harmony, mutual interest, sympathy, and loyalty prevail. The success of our hospital family is in no less degree dependent on such relationships for its permanent and useful existence. But how to bring about these ideal conditions, or approach them as nearly as possible within human limitations, is the problem that confronts us all.

The first practical step in the direction toward the attainment of these ideal conditions, it seems to me, lies in vesting the maximum of authority and responsibility in the superintendent of the hospital. It should be her or his absolute prerogative to select or reject his or her assistants, as well as any other subordinates within the institution, without any other influences than those of merit and compatibility. In other words, the greatest factor in creating and maintaining harmony or cooperation in the hospital organization lies in the choice of assistants, and therein, above all, we should not be hampered or embarrassed. Once you have chosen your assistants for their ability and willingness to carry out your policies faithfully, you have found the keynote to successful management—that is, of course, provided your policies and methods are correct.

As before mentioned, we must not omit from our hospital family our very important friends, the medical staff. Second only to our solicitude for our patients, our regard for facilitating the work of our staff doctors should occupy a generous share of our time and efforts. We all recall many physicians whom we consider among our most loyal associates, who mollify and minimize their patients' petty complaints, who evoke courtesy and kindness by example, who are the stanch friends of the nurses, but never overstep the bounds of propriety; who accept and abide by the rules of the hospital as if they had themselves instituted them, who teach the interns, admonish them when necessary, and encourage them at all times, who cheerfully volunteer their best and untiring service in behalf of our needy patients without thought of remuneration; to them we owe a deep and lasting appreciation. Were all the doctors to lend the assistance and cooperation that is easily within their power, and which, fortunately, so many of them do, how much smoother sailing we would enjoy.

It is unnecessary to recite to you the unnerving experience which the meddlesome and irritable, insatiable practitioner can inflict on the entire personnel of the hospital through his own lack of perception and courtesy. These remarks apply equally forcibly to the nonstaff physicians who bring their patients to our institutions, and who, though not directly included in our hospital family, render us a valuable service—not alone financially, but in the practical education of the nurse and intern.

If we could but have our intern as he should be, how courteous, gentle, and sympathetic the patients would find him, and yet reserved, dignified, and attentive. His position is not always to be envied in his relation to the attending physician. His opinions may be solicited and subjected to severe criticism, and, regardless of his embarrassing position, he must maintain his self-possession and proper respect for his superior, never forgetting his obligation to carry out faithfully all orders, whether in accordance with his own views or not, and never indicating to the patient by word or action the existence of any difference of opinion between himself and the attending physician. In these and many other respects can the intern contribute to the general efficiency of the hospital. His attitude toward the head nurses and pupil nurses, if limited to strictly ethical and professional association, will relieve us of many a vexing situation.

On the other hand, the importance of the intern's position in the hospital organization, while in great measure dependent on his individual efforts, should nevertheless command for him the respect and consideration of the attending doctor as well as of the nurse.

The characteristics of the superintendent of the hospital are, as a rule, accurately reflected in the qualifications of the head nurses, for it is in the appointment of head nurses that the ability and shrewdness of the superintendent are demonstrated. Her authority and executive ability should have full sway, at least in this important phase of her position; here she may exercise her insight into human nature, and distinguish and recognize merit. These members of the family, fortunately, are absolutely within the choice of the superintendent. The board and staff are already self-constituted members of the hospital family; in fact, it is they who determine on the superintendent. The responsibility, then, for the efficiency of the head nurses rests entirely on the superintendent, and, therefore, if the head nurses are not agreeable, tactful, sympathetic, gentle but firm, in caring for their patients, the fault lies largely with the superintendent. The head nurse's position does not mean merely sitting at her desk, making rounds with the doctor, and writing a few orders. It requires her to be constantly alert, to take a personal interest in her patients and evidence it by frequent visits; industry, economy, dignity, and personal appearance are all qualities which she should not only possess, but instill in her pupil nurses; and, above all, she should show by the kind of service she renders that *THIS* is her chosen profession and not merely her employment. She should command the confidence of her patients in the adjustment of difficulties that may arise, without the necessity of their being brought to the superintendent, and she should invariably report her action to the superintendent, and, should circumstances require the attention of the superintendent, then will she show her discretion by presenting the facts immediately, rather than permit them to reach the superintendent by way of the patient or the doctor. In fact, she should be able to detect dissatisfaction and adjust conditions before complaints reach the superintendent through the patient or the doctor. In brief, she should be what has been aptly termed an "educated saint," with the additional virtues of diplomacy, tactfulness, and resourcefulness, and withal possess a keen sense of humor.

The character and reputation, even of the successful hospital, is in the final analysis determined by the charac-

ter and efficiency of the pupil nurses; and, while the pupil nurse is theoretically expected only to carry out orders, she still has a measure of personal responsibility, which, if wisely exercised, will contribute greatly to the cooperative whole. We all know the qualifications of the ideal nurse and we know equally well that the available material comes far short of meeting these requirements. Had their earlier home life been such as to cultivate habits of economy, respectfulness, kindness, and consideration, a thoughtfulness of others, a forgetting of self, we could spend a great deal more time in teaching them the actual theory and practice of nursing rather than in trying to eradicate the shortcomings of twenty years' formation. Show me the pupil nurse who has had the benefit of an excellent home training, and I will in turn show you a nurse who early receives the confidence of her superintendent and is intrusted with responsibilities, and who at the expiration of her term of training is sought after to enter the hospital organization.

Nor does our hospital family end here, there are the men and the maids-of-all-work. In most cases the early training and home breeding of the subordinate members of the hospital household have been neglected. Not all of us can be ladies and gentlemen, if culture and education and refinement are necessary qualities and virtues of gentlefolk, but the humblest of our coworkers can be honest, loyal, unselfish, and courteous, and whether they are so depends in very large measure on ourselves. Almost nowhere else are we so sure of the truth of the biblical injunction to "give, that ye may receive." Let us not forget that the subordinates in the hospital are our coworkers, not our menials and slaves; they are very human —perhaps more so than ourselves; they respond generously to kindness and courtesy and consideration. Let us remember that these humble folks are not the recipients of earth's choicest blessings. Many of them have tried the heights and have fallen back so hard that all ambition for another try has left them; they need counsel, support, guidance, a cheery word on occasion, and sometimes reproof. But it is very certain that hospital subordinates give to their institution of the best that is in them in quite as large measure as do those whose capacity and responsibilities are greater—even the superintendent of the hospital.

And so our hospital family, from the highest to the lowest, is made up of a number of human beings, not unlike a garden of flowers—if nourished by a rich soil of courtesy and kindness and consideration, the individual flowers will grow and develop and bloom, and send forth to pervade the air all about with sweetness and beauty and happiness.

Scientific, Economic, and Humane Conduct of Municipal General Hospitals in the Southern States.[1]

BY J. W. FOWLER, A. M., M. D., PH. D., SUPERINTENDENT LOUISVILLE CITY HOSPITAL.

Standing in the presence of the greatest assembly of hospital experts in the world, I indeed would be lacking in appreciation if I did not express my thanks for the high honor conferred on me by your distinguished president, Dr. Howell, for inviting me to address the American Hospital Association on this occasion. I feel somewhat abashed in addressing this brilliant gathering of hospital superintendents, trustees, physicians, surgeons, pathologists, architects, and superintendents of nurses, who are gathered together from every section of the North American continent, on the subject of the hospitals of the southern states. My diffidence increases when I see about me so many representatives from this section of our country who are better qualified than myself to speak for it.

PECULIAR SOUTHERN PROBLEMS.

The building, scientific organization, and economic management of a general municipal hospital in the southern states is quite a different proposition from that of a similar institution in the northern, western, or eastern states. The racial problem in the South enters largely into the construction of a municipal hospital, making it necessary to double the number of wards, dining rooms, roof gardens, etc. Wherever there is a white ward—be it female, male, baby, psychopathic, or isolation—there must be provided a corresponding negro ward. This fact demands a much larger building and imposes a greater expenditure in the equipment and maintenance.

SEGREGATING THE NEGRO.

It also requires a nicety and precision, involving, as it does, the old, old question, so dominant in the South, of caste and color. How strange it is that a few miles make such a difference in the customs of a people. Just south of Mason and Dixon's line, upon the southern bank of the Ohio river, is the city of Louisville, and just north of the line, not far away, on the same tawny river, is Cincinnati; yet in the municipal hospital at Louisville there must be absolute segregation of black patients, while in Cincinnati they lie side by side with white patients in the same wards. Segregating the negro patients leads to many difficulties. The candidates for admission into the nurses' training school, in some instances, when informed that they have to take care of negro patients, decline to enter; and sometimes, after they enter, they refuse to do duty on a negro ward. Most of the nurses, however, declare that the negroes are more grateful than the whites, and this compensates them for waiting on them.

HUMANE TREATMENT OF THE NEGRO.

The notion prevails among most people in the North that the negro does not get fair treatment in our schools and hospitals. This is erroneous; the negro receives fair treatment. The South recalls with gratitude the fidelity with which the negro during the war between the states guarded the defenseless women an dchildren of the South whilst their fathers and husbands were fighting against his freedom.

THE CONFEDERATE SOLDIER'S GRATITUDE.

When the southern soldier returned to his desolate home at the end of the war, he took the negro's black and humble hand in loving grasp in recognition of his faithful care of the helpless ones he had left in his charge. Nowhere else in the world could the negro receive better treatment than here in the Southland, where we know him best. He shares our school funds, and when he is able to work we give him employment; and when he is sick we take care of him in the same identical way that we care for the white man. The only difference is that we segregate him. We have kept faith with the negro and no section shows a more prosperous labor population than the negroes of the South. There is no such thing as anarchy or strikes among them.

A SOUTHERN PLANTATION.

I was reared on a southern plantation in Kentucky, belonging to my grandmother, who was a slaveholder, owning and working about thirty negro men and women. The negro families lived in log cabins, in a semi-circle about

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

the "big house," and were happy and contented. All during the war they took care of "Ole Missus," and many of them remained with her after the emancipation proclamation as voluntary farm hands up to the time of her death. Who can say that the negro is not capable of all the best sentiments that animate the human being? Their affection is easily won and the effect is lasting. My earliest recollection of a hospital was the one in the "big house," where the darkies were humanely cared for when sick by the family doctor.

NANCY HANKS AND ABRAHAM LINCOLN.

It may be interesting to my audience to know that my grandmother was the girlhood friend of Nancy Hanks, the mother of the great emancipator, and was reared in the same neighborhood in Kentucky where Nancy Hanks lived. My grandmother always spoke highly of Nancy's character.

TYPES OF SOUTHERN HOSPITALS.

The hospitals of the South may be divided into four classes. We have types of each class in our respective cities. We have the municipal general hospital, such as the Charity Hospital of New Orleans or the St. Louis City Hospital. These hospitals are called general hospitals because they usually admit all kinds of diseases. They are the hospitals that are most frequently used by the medical colleges for clinical teaching of students. Then we have the municipal special hospital for contagious diseases, such as diphtheria, tuberculosis, measles, scarlet fever, meningitis, and small-pox. We also have special hospitals for the treatment of skin diseases, aural, children, and neurological. In addition to these there are general hospitals built and endowed by philanthropists. These latter hospitals select certain diseases which they elect to treat, and decline to accept those they do not care to treat, such as venereal, contagious, and tuberculosis. A luminous type of these hospitals is Johns Hopkins. My experience as superintendent of a municipal general hospital teaches me that the chief burden of caring for the helpless, sick, wounded, and afflicted of the masses, in the main, falls on the municipal general hospitals of the country. They take all kinds of diseases and handle them humanely and scientifically.

HOW SOUTHERN HOSPITALS ARE OPERATED.

As to the modus operandi of the southern hospitals, they are similar to other sections of the country as regards being in an experimental and evolutionary state, and are trying every plan in vogue in other parts of the world. In some of our cities that have what is called the "open hospital," where there is no exclusive staff and the family doctor follows the patient into the hospital and treats him, or, if an operation is necessary, selects the surgeon and assists him in the operation, but, after the operation, again assumes charge of the patient. This system has many advocates, and works successfully in many of the smaller cities. It has the advantage of doing away with all jealousies among the local physicians, and all doctors, so far as the hospital is concerned, are on an equal footing.

Then we have hospitals that divide the work equally between the staff of a medical school and the physicians not connected with the school. This system is worked in two ways. One way is for the medical school to take care of one-half of the patients the year round, and the nonschool staff members the other half. The other way is for the school men to have the winter work and the nonschool the summer.

SOUTHERN ARCHITECTURE.

In architectural style the southern hospitals are about as diversified as those of the North. Some of our cities have the old-fashioned block hospital, with the wards arranged in different blocks, exposed to the sunlight and air on two sides to insure cross-ventilation. A few cities have the corridor hospital, with the wards arranged along one side or both sides of a corridor, and ventilated only on one side.

The more modern hospitals are built on the pavilion hospital plan, in which the wards are a parallelogram, entirely detached on at least three sides, with windows on both sides of the long axis, opposite each other, and attached to the main building at one end only. Of this type is the Louisville City Hospital; the combination corridor pavilion hospital, such as the Johns Hopkins; and the composite hospital, which comprises all irregular plans, and which cannot be grouped in any of the other classes.

NURSES' HOMES OF THE SOUTH.

The building and maintaining of a nurses' home, where a homelike and social atmosphere is created, has largely increased the efficiency of the pupil nursing force. It enables the hospitals which have tried the experiment to obtain a higher class and better educated force than heretofore. Some of our southern hospitals have built nurses' homes that have every convenience that a cultured young lady could desire—gymnasiums, plunge and shower baths, kitchenettes, laundries, music rooms, sitting rooms, reception rooms and roof gardens, exclusively for the nurses.

DOMESTIC EMPLOYEES' HOMES.

A number of the hospitals of the South have developed and built homes for their working staff and provided recreation and reception rooms for them. This has helped to secure a better and more permanent grade of employees.

DUTIES OF A SOUTHERN HOSPITAL.

The chief duty of our hospitals is to care for the sick and wounded; to nurse those who cannot recover is only secondary. In the old days the principal service rendered by a hospital was nursing the incurables. Many of our best hospitals today, which are thoroughly equipped for modern practice, were erected years ago only for the care of destitute and confirmed invalids. Now we nurse, examine, and safeguard patients, and educate them to lead healthy lives and to avoid the occurrence of future sickness. We teach the patient in the hospital cleanliness of body and clothing, and how to select and prepare proper foods.

THE DOLLAR MARK NOT COUNTED.

Hospitals in the South are not measured by dollars and cents. The advance of medicine is very rapid, and the superintendents of hospitals must keep their boards informed as to this advance, so that changes may be made and appliances secured to meet these advances. The superintendents are judged by the good the hospitals have accomplished from a surgical and medical standpoint, and not by expenditures.

POTENTIALITIES.

The most potential things in the management of hospitals are the reports and records. They represent a vast number of details, and require a world of time and study to prepare them, but there is nothing so important in achieving results and maintaining administrative discipline. A hospital that institutes the proper records cannot fail to be so well managed that the probe of the inquisitors or the complaints of the critics can be offset by the facts. To formulate and establish a thorough set of rules requires a perfect knowledge of all the details of

the hospital and an intimate acquaintance with the patients of every department and their needs. Possessing this knowledge, the superintendent is in instantaneous touch with every department, and the management is bound to be a success.

A WORD IN REGARD TO OUR RECORDS.

The records of the municipal general hospital of Louisville, of which I have the honor to be superintendent, are in part original, of my own making, but in greater part they are a selection from the leading hospitals that I inspected in my journey over the country for that purpose. Therefore, I hope I may be permitted to claim that our records are as good as any in America.

SOME HOSPITAL STATISTICS.

There are 1,000,000 people sick all the time in the southern states. Statistics show that the average expectation of life fifty years ago was thirty-three years. Since that time the growth of hospitals has enabled the sick to take advantage of modern medical and surgical aid, as applied in an up-to-date hospital, and the average has been raised to forty-five years. I firmly believe that this age may be increased to sixty years if those who become sick will seek the aid of modern hospitals in their helpfulness along the lines of getting well and remaining well.

CONTRAST OF OLD AND MODERN HOSPITALS.

The hospitals of the South are very different today from those at the close of the war, when we had nothing left but army hospitals. The southern home can no longer compete with the hospital in the care of the sick. Such an admission would have been regarded as heresy by our grandfathers, but today is conceded generally. Change in the attitude of the people to the hospital implies the actual change that has taken place in the hospitals themselves. These institutions are no longer cheerless, uninviting places, where the sick and superannuated are sent to die; in fact, nearly all of them get well. Overcrowding, lack of attention, unscientific treatment has been superseded by a new, scientific system which develops its own technic of efficiency and humanitarianism.

HIGH-CLASS SERVICE AND DIETS.

Patients in a southern hospital today get the service of a highly cultured staff of physicians, both in surgery and medicine, and a carefully trained body of nurses who thoroughly understand how to care for the sick and wounded, deftly and noiselessly. The diets are in skilled hands, and the food is nutritious and of the best quality that the market affords. The linens are the cleanest that up-to-date laundries can supply, and an abundance of fresh air and plenty of sunshine are provided by sun parlors and roof gardens. The cares and personal responsibilities of business and the anxieties of housekeeping are forgotten, and hope, confidence, and peace pervade the southern hospital atmosphere.

SOMETHING ABOUT OURSELVES.

Dr. Howell requested me to say something about my own hospital, which is the "last word" in hospital architecture in the South. The new City Hospital of Louisville was decided on and built by its citizens. It is maintained by general taxation. The people delegate the management to the mayor and the board of safety, and they to the superintendent. All authority to conduct the hospital is given to the superintendent, except the appointing power, which is in the hands of the board of safety, and the actual prescribing, which is given to the medical department of the University of Louisville.

MAYOR AND BOARD OF SAFETY.

It is the fashion to say that a partisan board cannot conduct a hospital successfully. This is a mistake. In my five years' experience under a Democratic mayor and board, in no instance did the mayor or any member of the board thrust politics into the hospital. They have never asked me to admit a patient nor give an applicant a position on account of his politics. Nor have they, at any time interfered with my management, except to advise and help. My only instruction from our distinguished mayor—who, by the way, is a physician—was "to take care of the sick and wounded properly and to be superintendent in fact as well as in name."

THE BLUE GRASS METROPOLIS.

The metropolis of Old Kentucky is truly a great city. It has, counting her sister cities of the Falls, New Albany, and Jeffersonville, and the towns within a short radius, 400,000 people. The particular pride of the city is our new million-dollar hospital for the benefit of the unfortunate sick who, through temporary financial stress, are unable to care for themselves. It is also the high calling of the hospital to give the medical students of the University of Louisville their necessary clinical experience.

At this point I feel that I must say a word about what is undoubtedly a no less important feature in the character of a city hospital than its efficiency in the matters already described. I refer to

THE RELIGIOUS AND MORAL TONE OF A CITY HOSPITAL.

As a public hospital we have to compare with the many excellent institutions erected in our midst by the munificence of private philanthropy. I need not attempt to prove, what all of you must know, that the general public, and especially its very poor, for whom a city hospital is chiefly built, view it—owing, of course, largely to ignorance, and yet not without some excuse—with suspicion and dislike, other hospitals, such as are managed by sisterhoods, churches, and private enterprises, being sought in preference. A clerical friend of mine, the rector of an Episcopal church in our city, who has frequently visited and much admires our hospital, told me that he had recently lost a whole family from the membership of his church because he had advised them to send a sick relative to the city hospital. It was thought to be an insult, (1) because it *was* the city hospital, (2) because of the believed reports of general carelessness and want of sympathy on the part of the doctors and nurses, (3) of the believed reports of poor food and accommodations, (4) of the believed reports of the lax moral tone of a city hospital, and (5) because of the lack of religious oversight.

These are some of the ideas entertained by the general public, and especially the poor, with regard to the character of a city hospital, ideas which, while they may have had some ground in the past, have absolutely none in the present; ideas, however, which I need not say must be eradicated if great institutions such as ours, supported by the taxpayers, are to take the position in the minds of the general public which is essential for their success.

On the points I have enumerated much, of course, might be said. To put the matter briefly, what are we doing in Louisville to accomplish the end to which I have just referred?

HOMELIKE INFLUENCES.

In the first place, the institutional character of the hospital is kept in the background as much as possible, and every patient is made to feel as much at home as circumstances will permit. No woman is ever delivered before a class, only two or three students being ad-

mitted at such times, nor is any woman ever examined except in the presence of one or more female nurses. No operation is performed by an intern alone, the rules requiring a staff member to be present at all operations. Then, a high character of pupil nurses is secured by accepting no candidate unless she brings a letter from her pastor, certifying that he knows her personally and will vouch for her character as a young lady of education and good morals.

RELIGIOUS AND WELFARE WORKERS.

In the matter of religious care, we let the patients know that they can have the attendance of their respective pastors whenever they wish them, and charity and welfare workers are always welcome.

LADY BOARD OF VISITORS.

I believe our municipal hospital enjoys the distinction of being the only one in America which has a lady board of visitors, appointed by the mayor. They do not act as an aid to the superintendent, as the woman's auxiliary boards do in the endowed and religious institutions, but only visit the hospital and report to the mayor what they see and hear.

DARKNESS OF NIGHT IS OVER.

We have much to do yet, of course, to build up and mold the various departments of our new hospital into a harmonious whole for the purpose of lessening the sum of human suffering and lengthening the duration of human life. Notwithstanding, however, the work which thus lies before us in attaining to our high ideals in the completion and organization of our new municipal hospital, the darkness of the night is already fading before the growing light of the coming day.

CONCLUSIONS.

Like giants from their swaddling clothes rise the great hospitals of the South. From the southern city of Baltimore on the east, where the renowned Johns Hopkins holds aloft the beacon light of scientific progress, to the far western city of Los Angeles, in southern California; from the gateway of the South, the city of Louisville, at the Falls of the Ohio to far-away New Orleans; from St. Louis, with her great system of municipal hospitals, to wonderful Atlanta; from Austin, on the sunkissed plains of Texas, to fair Mobile; from Memphis to Savannah; and from Charleston, where the first gun was fired in the greatest conflict the world ever witnessed, to Richmond, the Confederate capital, where in imagination we can still hear the roar of the mighty artillery of Grant and Lee as they struggled for supremacy through the terrible battles of the Wilderness, Cold Harbor, Five Forks, and on to the close at Appomattox, the southern people with prodigal generosity have built and are maintaining private and municipal hospitals equal to any in the world.

Signatures are being sought in California for a petition to place on the ballot for the November election an initiative amendment providing for the establishment by the state of a system of sanatoriums, hospitals, dispensaries, and other agencies for the prevention of tuberculosis and the care and cure of persons thus afflicted. It is provided that bonds in the sum of $1,000,000 shall be issued for the establishment of these institutions. Only persons who are taxpayers or who have lived in California at least five years, it is provided, shall be admitted to the hospitals and sanatoriums, but all persons afflicted with tuberculosis shall be treated at the dispensaries. The State Board of Health will have charge of the system. Dr. Robert A. Peers, of Colfax, is at the head of the movement.

AMERICAN MEDICAL ASSOCIATION CONVENTION—AIR PROBLEMS IN HOSPITALS.[1]

Consensus of Opinion is That When Medical Science Has Worked Out the Needs of Patients, the Necessary Mechanical Equipment Can "Fill the Prescription"—Abstract of Papers Read.

[Continued from the August number.]

This symposium on Air Problems, in the Hospital Section at the Atlantic City meeting of the American Medical Association settled one thing—viz., that the whole subject of air and atmosphere, and humidity and temperature for the breathing use of human beings, is wholly unsettled, and that the scientific work necessary to settle it is just beginning to be thought about. The purpose of this symposium was to introduce the subject so that it could be taken up for study in some comprehensive way. This whole subject is not only unsettled, but it seems to be wholly uninteresting and unattractive, both from the standpoint of the hospital people and members of the medical profession. There were not a dozen people who came to the hospital section to listen to the papers to be read on the subject of air problems, and two-thirds of these were gone before the session was half over, leaving the readers of the papers and the officers of the section and a few courteous friends who were willing to make the necessary sacrifice to sit through a wholly uninteresting morning.

And yet, any member of the medical profession would admit frankly, if he were asked, that the subject of air problems is probably more important than any other that concerns the public health and the welfare of patients in the hospitals. But members of the medical profession seem perfectly willing to let others do their thinking for them on this subject. They are certainly not doing it for themselves.

PROFESSOR BASS' PAPER.

Prof. Bass' paper was the first on the program, and, being an engineer and a hygienist and sanitarian, Prof. Bass took up the physical part of the subject and attempted to only state the problem.

"The proper tests of any ventilating system," he said, "depend ultimately on biological facts." When an engineer presents the subject of air problems in this way, it seems incredible that the medical profession can remain so placid and noncommittal and disinterested through the further reading of such a paper.

"When the engineer designs a structure," he said, "he must know the forces that will tend to destroy or strain it; he must know their direction and intensity, and he must know from tests the strength of the material which is to withstand the forces."

Then he proceeded to a statement of air problems in their simplest form. Ideal air, he said, is to be found on the countrysides, on the seas and mountains, away from contamination of extraneous matter, such as the smoke of cities.

Then the thing to do about air problems, Prof. Bass said, is to create in our habitations, hospitals, dwellings, etc., conditions similar to those to be found where the air is known to be advantageous for breathing purposes; but at that point we get into some most complex side problems, and it is the very complicated character of these factors that makes the whole study of air so difficult and so unattractive. It would be impossible to duplicate nature's achievement in the matter of pure air, the reader thought;

[1]This is an abstract of papers read before the Section on Hospitals, American Medical Association, Atlantic City, June 25, 1914.

that could come only after years of study and after a thorough mastery of the physiological as well as the physical sides of the problem. But there were certain "curves of comfort" that were pretty well settled, and these had to do with temperature and humidity, and he thought the first stage in the settlement of the problem was to create a mechanical system of ventilation that would be the nearest possible approach to these curves of comfort; this much having been achieved, it would not be so difficult to go on improving a little here and a little there.

Prof. Bass told of some experiments he had performed during the year under the direction of the New York Ventilation Commission. The experiments were tried out on school children, and two systems of ventilation were employed: (1) air supplied from out of doors—that is, direct ventilation by means of windows; (2) mechanically treated air, washed and rewashed, and circulated and recirculated, being lowered in temperature each time before it was sent back to the room for another use. He found that the mechanically treated air had not lost that peculiar odor that comes into the air when a room is occupied by considerable numbers of people. But very careful physical and physiological tests were conducted by trained observers, and all these tests failed to show any appreciable difference between the two airs.

Not only the quality, physical and physiological, of air is important, but the movement of air is extremely, if not even more, important than the quality of the air itself, and the influences of air movement are probably less understood than any other part of the subject.

For present purposes, Prof. Bass held that for small hospitals the best results were being obtained by vent registers at the ceiling of rooms, connecting to ducts terminating at the roof, accelerating coils being inserted. In this system, entering air is not controlled, but comes in through windows or by leakage. The reader thought this system would not do all for large hospitals, and, as those institutions grew in size, so the ventilation problem became more and more complicated, but he didn't think the average hospital engineer, or rather the engine room operator, was capable of doing any responsible work in this field without the direction of trained experts.

In conclusion, Prof. Bass emphasized the point that studies of ventilation systems and ventilating equipment must be made with the proper goal clearly in mind—viz., to secure proper temperature and humidity regulation, to keep the air in motion and properly distributed, and to prevent offensive odors from circulating.

PROF. WINSLOW'S PAPER.

Prof. C. E. A. Winslow, chairman of the New York State Commission on Ventilation, read the next paper, his subject being, "The Importance of Studying the Actual Condition of Hospital Air." Prof. Winslow thought the first thing to be done about this topic was to agree on a starting point. "We hear on the one hand that costly ventilation plants have altogether failed, and that the only way to keep a hospital in good condition is to abandon fan ventilation and admit fresh air by way of the windows," the speaker said; "on the other hand, there are signs of a reaction against this view, and we hear whispers that even in the most advanced open-air hospitals conditions are by no means always ideal, particularly at night and when the superintendent is not in the wards."

Architects and engineers, the reader thought, to say nothing of hospital trustees, are finding themselves buffeted about in a most confusing manner between the various disputants. Ventilating plants which cost many thousands of dollars are lying idle in hospitals all over the country, and new hospitals are being built in which no artificial ventilation is planned at all; and yet, if it finally develops that mechanical ventilation is the thing, far greater expenditures will be necessary before an installation for these buildings can be completed. The curious thing to Prof. Winslow is the fact that nearly all the conclusions arrived at in regard to air problems seem to be based on nothing more or less than suspicion or "belief," since no scientific arguments have been brought to substantiate the various radical views—indeed, there are no scientific arguments at hand.

Prof. Winslow thinks with a sling psychrometer and an anemometer some important facts can be obtained, and he thinks these two instruments are as necessary to the student of ventilation as are the clinical thermometer and blood testing apparatus to the practicing physician. It has been clearly shown by eminent physiologists in Germany, England, and this country that the discomfort and physiological disturbance experienced in a badly ventilated room are primarily due, not to chemical impurities in the air, but to heat and humidity—not to respiratory phenomena, but to derangement of the vasomotor mechanism. Predicated on these assumptions, the reader thought there was great need of some accurate records of temperature and humidity under conditions in the room and condition of patients that could be definitely evaluated; but it is also necessary, in connection with the same set of studies, to observe changes in the patient and in the air due to air movement, and on this factor undoubtedly depends the objectionable odors in stale or overused air in hospital wards. It is necessary, therefore, in connection with these tests to determine the carbon dioxid constituent, and, if atmospheric dust can be measured at the same time, and also the number and character of suspended bacteria, the tests would be even more valuable.

Prof. Winslow told of a series of 1,800 observations made by himself and Prof. Baskerville in connection with a study of school-room ventilation in New York City. "The result of this study," Prof. Winslow said, "was to show, in the first place, that the hectic accounts of New York school-room air, which had been spread broadcast, were, as Mark Twain said of his own premature obituary, 'grossly exaggerated.'" The speaker gave the figures of these tests, which showed some interesting facts. The conclusions were that most of the school rooms in New York City were not in bad shape at all on the score of air, but a few of them needed attention, and the remedies were applied as a part of this work.

Prof. Winslow admitted that his purpose in preparing this paper was to help in the effort to create an interest in a study of air problems, and to insist on the employment of scientific means which are really at hand, but scarcely ever employed. He did not think the subject was veiled in mystery, or that the problem was incapable of solution. He thought it needed only a proper approach.

DR. JAMES ALEXANDER MILLER'S PAPER.

Dr. Miller's paper was "Hospital Ventilation from the Viewpoint of the Clinician." The reader thought there was a consensus of opinion in the medical profession that the chief desire in the matter of air for hospitals was to reproduce out-of-door conditions by the opening of windows. He could well understand why this attitude was so common—on the one hand, the increasing popularity of the open-air method of treatment for many diseases, and on the other a diminished confidence in the adequacy of mechanical ventilation systems as usually installed and

operated. The speaker thought it was a favorable sign that medical men were even asking questions about air problems, and he thought that as they discovered more and more that out-of door fresh air could not always be had in hospitals, they would be willing to turn their attention in a greater measure to the study of air problems, as these affected the larger metropolitan hospitals, where it is a practical impossibility to use open window ventilation. He thought there was no doubt that window ventilation is best, because out-of-door air does really lend itself to the treatment of many diseased conditions, prominently tuberculosis, pneumonia, the various anemias, heart diseases, certain nervous disorders, septic conditions, typhus and typhoid fever, etc. But there are other conditions where open air is to be avoided, especially open air in rapid circulation—for example, in acute, catarrhal affections, laryngitis, bronchitis, some of the acute kidney diseases, the arteriosclerosis of elderly people, acute rheumatism, and the like. Contemplation of the varying necessities of these different diseases presents the problem of air as a most important one for the clinician. It is the necessities of these different classes of patients that have made balconies and porches so prominent a feature of hospital architecture in recent years, and this, too, is the reason why small wards are more desirable than large ones. But, even leaving aside the care of individual patients either in isolated rooms or by some out-of-door method, there are the large general wards to be considered, and there is no doubt that under the present methods of air control some patients are badly hurt, while others are greatly benefited.

As to the actual value of fresh air, the speaker was not so sure. He thought the question of temperature, humidity, and the pressure under various degrees of motion, together with certain well-known positive impurities—chemical, bacteriological, or physical (dust)—had more to do with the improving or unmaking of fresh air than any of the mysterious conditions of the air itself. He thought also that carbon dioxid had, in the light of recent experiments, lost a good deal of its terrors, and also the more insidious so-called organic volatile poisons. He thought none of these was as bad as it had been painted.

As for the clinical effects of varying airs on patients, the reader thought some interesting and really valuable work had been done. For instance, he believed it was now agreed that the blood pressure tends to rise in low temperatures and with increased barometric pressure, and that it falls with increased humidity and rising temperature. He thought it was also agreed that the body temperature was to some degree controlled by the surrounding air, and that the pulse rate is influenced by it to a certain degree.

The writer spoke of experiments that he had made to reproduce the results of some experimenters in regard to blood pressures, etc. He used children in his experiments, and tried to confirm the work of Howland and Hoobler, which showed that the blood pressure of children promptly changed when removed from a room to the open air. His experiments did not confirm the earlier findings. Some other experiments made in collaboration with Prof. F. S. Lee, of the New York State Ventilation Committee, were a little more satisfactory. Normal young adults were used, in which a high temperature—86° F.—and 86 percent relative humidity over a period of four hours gave definite rises in pulse rate and less marked diminution of blood pressure, and little or no changes in the body temperature. Similar observations at moderate temperatures—68° F.—and low humidity—50 percent—showed a distinct fall in pulse rate and temperature, with little change in the blood pressure. In another series of observations, the subjects, after the four-hour exposure to heat and humidity, were quickly exposed to cold air—60-65° F.—and drafts from fans; as a result, the pulse rate fell and the blood pressure rose. All these observations corroborated those of Howland and Hoobler and others, and would seem to suggest that the clinical good effect of cool and dry air may be measurable in terms of pulse rate, blood pressure, and body temperature.

But such studies, however, are simply beginning, the reader thought, and pointed the way to many unsolved problems before it can be stated with definiteness just how open or fresh air produces its good effects, and how we should differentiate to best advantage in the selection of cases and in the relative importance to be placed on the various factors in the air.

The reader was not at all sure that the so-called ideal conditions were in reality ideal; he thought that open-window ventilation could oftentimes give too much air for some patients and too little for others, and he doubted whether it was possible to regulate the problem of drafts and pockets of bad air in the corners. He thought the evil influence of drafts was very much exaggerated in the lay or even the clinical mind, and that, although the best books ascribe some eight-odd diseases and conditions to exposure to cold and drafts, yet recent studies tended to show that these conditions are usually due to bacterial infection, in which exposure plays little or no part.

PROF. FREDERIC S. LEE'S PAPER.

Prof. Frederic S. Lee, professor of physiology in Columbia University, had for his topic, "Laboratory Experiments with Air." Prof. Lee, in his paper, recited the scientific work that had already been done in the laboratories of the world, covering many years, on the subject of air conditions, but he admitted there were many unsolved problems that were still under the acute study of scientific men, some of which had to do with a coordination of the physiological with the laboratory side. He thought the laboratory was capable of some very able assistance to the clinician, but it had hardly been approached in a proper way as yet—the details of air conditions must be analyzed. To reiterate over and over again that air that has once been breathed is "bad" air and that "bad" air is "bad" air, without defining in what its badness consisted, is a sin not only against scientific reasoning, but also against common sense, and yet he had seen that sin committed. The same thing was true about the iteration and reiteration of the value of "fresh" air without making any effort to define what there was in its freshness that had virtue. This, he thought, was suggestive of an undeveloped stage of the subject or in the mind of the observer.

It was not Prof. Lee's purpose or function, he thought, to advise regarding ventilating methods, and he contented himself with suggesting that no ventilating method can be expected to be effective unless it is based on facts regarding the human well-being, which the laboratory is able to settle.

ARTHUR K. OHMES' PAPER.

Mr. Ohmes had for his topic, "Hospital Ventilation from the Engineer's Standpoint." The reader gave an interesting account of some mechanical ventilation plants in various parts of the country, among these the new Woolworth Building in New York City, where fresh air was brought from above the city down into the subway parts of the building, such as the deposit vaults, swimming pools, restaurants, kitchens, etc., and where it was

again hoisted more than a thousand feet and released as vitiated air at the roof of the building. The principle to which Mr. Ohmes addressed himself in his paper was that the engineer is capable of creating with a mechanical installation any condition in the air of a hospital or room prescribed by the clinician, but he did not think it was the part of the engineer or mechanic to also write the prescription for what was wanted in the form of hospital air. He elaborated in his paper on the advanced state of the art in mechanical ventilation, but insisted that it is limited by the undeveloped state of the art from the clinical and physiological standpoints.

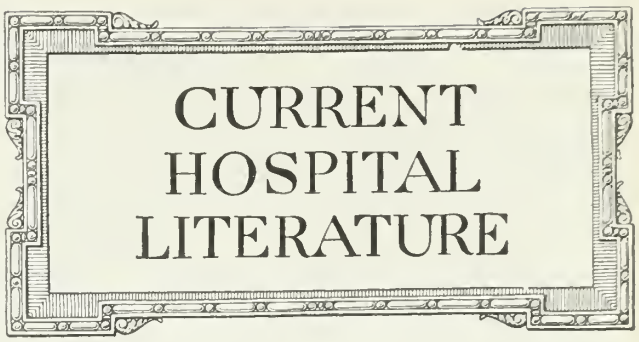
T. J. VAN DER BENT'S PAPER.

To Mr. Van der Bent is due the thanks of the medical profession, architects, engineers, and everybody else for his disinterested and laborious work of preparing this symposium. He has been working on air problems in his architectural labors for years—not with a view to settling them, but with a view to commanding the attention of those whose business, he says, it is to settle them—viz., hospital people in the medical and allied professions. Mr. Van der Bent, in his paper, therefore urged the study of the whole subject, and he felt that he had performed a useful function in bringing together men who were seeing this problem from different points of view. In his paper, Mr. Van der Bent gave a delightful little resume of the history of hospitals, beginning almost at the dawn of history and coming down to date, especially in regard to their methods of giving patients fresh air. As early as 1788, he said, closed courts and crowded hospital buildings were condemned and the condemnation has been going on ever since. "Why is it, then," he asks, "that we see the greatest overcrowding of buildings on small city blocks and even many of the new German hospitals?" And he proceeds to answer the question by insisting that mechanical ventilation is responsible for conditions that could not otherwise be attained.

Mr. Van der Bent insisted that it was the business of the medical profession and the allied sciences to solve this problem of air, and to formulate the solution in the shape of rules for the consideration of hospitals and other buildings. He thought such a committee as this, or a committee along allied lines, should also get to work for the solution of many other architectural problems. Architects, he said, were waiting to be informed what the medical profession wanted, and architects were quite capable of giving to the medical profession whatever its scientific dictates required. He thought it was high time that some scientific approach was being made to these subjects.

A fire at the Josephine Hospital in St. Louis July 30 did damage to the extent of $3,500. The institution is a private one conducted by Dr. Frank J. Lutz, a former president of the St. Louis Medical Society. Although some of the patients were in a helpless condition, all were safely removed.

A $50,000 county hospital is being erected in Kingsville, Tex. It is to be a two-story reinforced fireproof structure, with a large basement. The exterior will be finished with hollow tile and stucco. The building is 40 feet in width and has a length of 86 feet. All of the floors are of concrete. The basement will have a kitchen, janitors' room, morgue, laundry, boiler room, toilet, baths, elevator, and x-ray room. On the first floor will be a reception room, six wards, toilet, baths, office, elevator, pantry, storage room, a long corridor, and a screened-in porch. On the second floor provisions will be made for twelve patients' rooms, a sterilizing room, operating room, etherizing room, wash rooms, baths, toilets, and a screened-in porch. The equipment will be strictly modern.



Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Sanatorium or Bathing Institution? (Heil- oder Bade-Anstalt?)

A private sanatorium in Dresden gave its patients various medical baths, as light, carbonic acid, oxygen, and other baths. The city authorities declared the establishment not a sanatorium, but a bathing institution, and suppressed it for moral reasons. The proprietor appealed to the courts, but lost in all instances.

The New Nurses' School at the Ospedale Maggiore in Milan (La nuova scuola infermieri all' Ospedale Maggiore di Milano). Rivista ospedaliera, Roma, 1914, V, No. 4.

The administration of the Ospedale Maggiore in Milan has decided to establish a nurses' school in connection with the hospital. The students will get free board and lodging, and after the first six months a small compensation for their services.

Radium Treatment in the City Hospitals of Charlottenburg (Radiumbehandlung in den Städtischen Krankenhäusern von Charlottenburg). Ztschr. f. Krankenanstalten, Leipsic, 1914, X, No. 29.

The hospitals of Greater Berlin have formed an association for the purpose of acquiring 870 milligrams of radium; 125 milligrams have already been obtained, and suitable patients are treated with it. No special charge is made for radium treatment. The treatment is administered by x-ray specialists, who have taken a special course at the Royal Charity Hospital.

The Sanitary Waiting Room. W. C. Rucker, Assistant Surgeon General, United States Public Health Service. Reprint No. 147.

The author includes all places where considerable number of people come in more or less intimate contact. He claims that they are dangerous from the standpoint of sanitation, that they frequently offer opportunity for the ready interchange of organisms of disease, and, unless such places are maintained in a cleanly condition, they may be responsible for breeding contagion. In such situations, persons in the active or in the chronic carrier stage of a disease have ample opportunity to infect others, especially if they are careless in their personal habits, and through ignorance or carelessness are heedless of the health of others. In waiting rooms expectoration is frequently promiscuous, and occupants are sometimes obliged to breathe a vitiated and overheated atmosphere. Since the lethal common drinking cup and the deadly common towel have been banished by interstate quarantine regulations, and the purity of drinking water is insisted on, the

author believes an appeal to the public in behalf of the object will go far toward making the waiting room sanitary.

Should Nurslings be Cared for in Hospitals? (Sidebbono ospedalizzare i lattanti?) Varanini. Arch. di scienza ospedaliera, Bergamo, 1914, IV, No. 5.

In former times hospital marasmus was the great scourge of infants' hospitals, but now this can be prevented. If the hospitals are constructed according to the principles of hygiene, managed by competent men, and if the most careful attention is paid to the children, hospital epidemics and hospital marasmus will be prevented. As the dangers can be averted, nurslings should be cared for in hospitals as far as the needs require. Caring for the babies of poor people at their homes is not sufficient to reduce infantile mortality, which is extremely high in Italy.

Report of Committee on Inquiry into Department of Health and Charities and New York Hospitals.

The report claims to show why hospital work is less efficient than in Europe and why medical advancement with us is less rapid than in Europe; that the large percentage of incorrect clinical or ante-mortem diagnosis is partly due to the lack of medical knowledge among our better class of practitioners, and partly due to hasty and insufficient examinations. Too much reliance placed on inexperienced house physicians and interns also accounts for a portion of the errors. The report shows weakness in our hospital methods, even in our great centers, and an imperative need of more frequent autopsies. It is apparently believed in New York that publicity is as important in relation to hospitals as in other public utilities.

Industrial Insurance. J. W. Schereschewsky. Med. Record, New York, 1914, No. 2.

In his paper before the National Association for the Prevention of Tuberculosis the author draws the following conclusions: Industrial sickness insurance is an economic necessity in modern social evolution. The basis on which industrial insurance should rest is the prevention of illness and physical disabilities. Frequent periodical physical examinations of workers constitute the logical means by which defects and diseases can be detected in their incipiency. The scope of such examinations should be extended to include home as well as factory conditions. Industrial insurance based on preventive measures should redound greatly to the benefit of society by reducing the annual loss of time through illness, by establishing hygienic standards for industries, by favoring the enactment of uniform industrial legislation, and by increasing the efficiency of local health authorities. The cost of carrying industrial insurance based on preventive principles should be less than that of the present system.

Parasitism of the Clinical Institutes of the Universities and the Italian Hospitals (Il parasitismo degli istituti clinici universitari verso gli osperali italiani). Rivista ospedaliera, Roma, 1914, V, No. 5.

The Italian hospitals labored of late years under great financial difficulties, and one of the principal causes is the fact that the hospitals have to bear almost all the expenses for the university clinics. When the Government created the various university clinics, it compelled the hospitals to furnish the necessary space and material for the instruction of the medical students, with the understanding that the Government would compensate the hospitals for any extra expenses incurred by such an arrangement. But instead of carrying out this agreement generously, the Italian Government has been very niggardly with its compensations, which have always been far less than the actual expenses. The hospitals do not refuse to lend a hand in the teaching of medicine, but they ask for a full compensation of the expenses incurred. Recently the Italian Government has undertaken to erect sumptuous buildings for a university clinic in Genoa. This clinic is to be connected with the Pammatone Hospital, a venerable institution, and one of the oldest hospitals in Italy. This hospital is already burdened with a large debt, yet the Government laid three-fourths of the great expenses for the new clinic on the hospital. The author thinks that the law ought to be changed in such a manner that the hospital can be generously compensated for the expenses incurred in the construction and maintenance of all university clinics.

Hospitalization of the Tuberculous (Par la spedalizzazione dei tubercolosi). Ospedale Maggiore, Milano, 1914, II, No. 4.

A special committee of the medical society of the province of Milan met recently to discuss the question of hospital care for the tuberculous. The mortality from tuberculosis in the province of Milan is greater than that of any other region of Italy. Dr. Secchi declared that the city of Milan alone needed an increase of 500 beds if all the tuberculous of the city are to be cared for. It was finally proposed that each community build a small tuberculosis hospital, or that several communities should unite to establish a common sanatorium for the tuberculous.

On the Establishment and Working Results of the Slaughter House and Bakery of Kutzenberg Hospital (Ueber die Einrichtung und Betriebsergebnisse der Anstaltsschlächterei und Bäckerei Kutzenberg). Ztschr. f. Krankenanstalten, Berlin, 1914, X, No. 28.

The high prices for meat and bread induced the administration of Kutzenberg Hospital to establish its own slaughter house and its own bakery. The butcher trust of the city of Bamberg compelled the hospital to pay high prices for frequently inferior meat. The step was especially advisable, as the hospital is able to raise on its large estates enough cattle to cover all the demands of the hospital for meat. For similar reasons a hospital bakery was established. The hospital has now cheaper, better, and more sanitary bread than it could obtain from the bakers. Both establishments proved to be a great financial success.

A Ward-Cooling Plant in a Hospital. A. M. Feldman. Metal Worker, New York, 1914.

The author designed the cooling plant and supervised its installation in two small wards of the Mt. Sinai Hospital of New York. Outdoor air is forced by motor-driven sirocco fan through a water chamber in which the water is cooled by brine coils. From this chamber the air is forced through an upper chamber filled with additional brine coils, thence through short ducts into the wards, where cooled air enters near the floor level. The vitiated air escapes through open transoms. The possibility of warm air entering from the corridor is eliminated. In the type of air washer used the air is forced through a body of water, a float-controlled valve maintaining a uniform water level as the supply water is lost in evaporation. A brine coil of 5 square feet is immersed in the water of the washer, and 66 square feet of additional cooling surface divided into three sections is installed in the upper shell. The air is thus washed and partly cooled by passing through cold water and then passing over the cooling coils above. It is interesting to note that, while low temperatures were obtained in the cold room, the rela-

tive humidity was approximately the same percentage as that in the main ward with higher temperatures, thus indicating that the absolute humidity was reduced by the process of cooling. As beneficial results were reported, it may be inferred that air conditioning by lowering the temperature, and reducing the absolute number of grains of moisture, produces the effect, notwithstanding that the relative humidity may still show a higher percentage. The author made this deduction in a series of other observations.

Hospital Troubles in Rome (Krankenhausnöte in Rom). Ztschr. f. Krankenanstalten, Leipsic, 1914, X, No. 27.

Until lately the Roman hospitals had their independent administration. Their income came mostly from landed possessions, and amounted to 5,000,000 francs, to which the Government of Italy added 3,000,000. But as this money did not cover the expenses, the hospitals made debts until they found themselves in great financial straits. The Government then placed the affairs of the hospitals in the hands of a royal administrator, with directions to limit the expenses in such a way that the hospitals are cleared from their debts. He closed a number of small hospitals, discharged a great number of nurses and physicians, and employed a number of highly paid supervisors over physicians and nurses, which cost the hospitals large sums. He made the reception of patients into the hospitals very difficult. Only the poorest people were admitted without pay, and all others had to give security for a daily payment of at least 7 francs per day before they were admitted. This caused so much bad blood among the people that recently a general strike against the hospitals was declared.

When is a Hospital Efficient? Editorial in Med. Rev. of Rev. New York, 1914, June.

The editor believes, in determining efficiency of medical work, it is advisable to submit one's self to interrogations to bring out our opinions on the work accomplished. The Boston Dispensary has prepared a chart suggesting efficiency conundrums, the answers to which underlie efficiency tests. The keynote of hospital and dispensary service lies in the results in themselves that are to be understood and interpreted through testing them—a statistical compilation of number of patients treated, or the days of treatment, fails to indicate the actaul accomplishments of an institution. The knowledge that constitutes power can come only from testing results in the light of the general good that has been accomplished. The restoration of a patient to society in proper condition, enabling him to resume his duties and responsibilities, is one test of efficiency of present-day hospital methods. By this test most hospitals would fail to be classed as satisfactory social agents.

The Hospital's Responsibility in the Practice of Fee-Splitting. Editorial in Jour. Indiana Med. Assn., Ft. Wayne, 1914, VII, 333.

The writer believes only those who are benefited by the practice fail to condemn it, and very few of them have had the temerity to defend it. Since the undivided effort of the best of the medical profession is directed to this end, the obligation of trustees of hospitals and religious sects cannot be evaded. If men who countenance fee-splitting, and delude and fleece their patients, are admitted to the hospital staff, the institution is morally responsible. The unfortunate patient who goes to a hospital and is defrauded and mistreated by a fee-splitting doctor will hold the hospital, in a measure, responsible. In the crusade against a dishonest practice the public expects earnest, intelligent, and efficient help of hospital authorities, and all the moral, charitable, and religious forces back of them. If hospitals withheld the use of their wards to fee-splitting doctors, he believes the practice would soon be abolished.

Health Dependent on Humidity Control—Modern Heating System. W. R. Beckley. Metal Worker, New York, 1914, July 24.

The ideal heating system was once considered the one which was capable of maintaining even and satisfactory temperature. Later pure air was recognized as a necessity. Proper heat, with proper ventilation, was then considered the ideal condition. Today it is recognized that pure air and heat alone are not sufficient. Air, to be healthful, must be not only of the proper temperature and purity, but should contain certain amount of moisture per cubic foot. Humidity in our dwellings demands attention. No system of heating, whether steam, hot water, or warm air, adds moisture. The fact that a heating system may not lose any moisture in heating the air is not sufficient. Dry air has great affinity for moisture, the result being that heated air with a humidity of 12 percent immediately seizes on any moisture it can find. The human body is one of the largest contributors. Furniture and wood is another source. Any article in a room containing moisture is attacked and robbed, the result being that the air is able to obtain enough moisture to produce a relative humidity of between 20 and 28 percent. In obtaining such moisture a direct and permanent injury is the result. A relative humidity of 12 percent is practically an unlivable humidity. The average relative humidity in the American home during the period requiring artificial heat ranges from 20 to 28 percent drier than the driest climate known. Such a condition exists irrespective of the type of heating plant. Neither steam nor hot water apparatus adds moisture unless that system is leaking, for moisture cannot ooze through an iron pipe. The warm air system cannot add moisture, and in some cases may lose a little in the process of heating. The writer regards the steam or hot-water system better than the warm air, when considered from a humidity standpoint, only in so far as it may not lose any of its original moisture, but the results obtained from this fact are so small that they can be practically ignored; that every heating plant is defective from the humidity standpoint, and a solution of this important matter lies not in the heating plant itself, but in the installation of an apparatus that will furnish the necessary amount of moisture in connecting with the heating system. Water will evaporate only from its surface. In conclusion, he claims it is necessary, if efficiency is to be obtained, to devise a method of producing a large water surface at a point in the furnace casing, or in the indirect steam or hot water duct, where it will obtain heat, and at the same time will not affect the efficiency of the heating plant.

Carnegie Foundation and Education.

In his address at the testimonial dinner tendered him May 19, 1914, Dr. S. P. Kramer referred to features in the charter of the Carnegie Foundation which affect the medical institutions of Cincinnati. In the department of Hospitals Organization and Powers, section 139 provides that the head of the Department of Hospitals shall be the Board of Hospital Commissioners of seven members. Three members of this board are to be citizens appointed by the mayor; members one to seven without compensation, and the department shall manage and supervise all hospitals of the city. The speaker stated that neither to

the bishops of the Church nor to the bishops of finance, but to the people who support the university, shall the control of the institution be given; that if the people of Cincinnati are generous enough to build and maintain a university and a great hospital, then these institutions should be managed by the people and for the people, independent of any control by the Carnegie Foundation.

Palace to Be Hospital.

A Budapest correspondent, under date of August 3, informs the press that Countess Szechenyi, formerly Gladys Vanderbilt, has placed her palace at the disposal of the army, and 600 reservists were then quartered there. The correspondent adds that the countess intends to organize a Red Cross corps and use the palace as a hospital.

Tokio Hospital.

St. Luke's Hospital, Tokio, established some years ago through medical missionary channels of the Episcopal Church, is now to become a thoroughly modern international hospital as a practical monument to international friendship and cooperation in medical science. Many American residents of Tokio are interested. This project of the recent Japanese Council was presided over by Count Okuma, the Japanese premier.

Hospitals in Greater New York.

If the Charter Revision Committee carries out the recommendation of the hospital committee of the Board of Estimate, the department of public hospitals will be a separate and distinct feature of the city administration of Greater New York. By combining the Bellevue and allied hospitals with public hospitals of the department of public charities in Brooklyn, Manhattan, and the Bronx, the department of public hospitals will be established.

Metropolitan Life Insurance Sanatorium.

The Supreme Court of New York having decided the right of the Metropolitan Life Insurance Company to establish such provision for treatment of its employees suffering from tuberculosis, the Metropolitan becomes the pioneer in such an enterprise. In the presence of officials and guests the new tuberculosis sanatorium at Mt. McGregor, a few miles from Saratoga, was recently dedicated and opened. It has at present 69 patients, and when completed its capacity will be 229.

Venereal Diseases to Be Reported.

As the Lancet-Clinic (Cincinnati) states, Montclair, N. J., is well to the front in sanitary matters, and now comes forward with well-conceived regulations of its board of health in the matter of careful registration of venereal diseases. They provide, in part, that the superintendent or other officers in charge of public institutions, as hospitals, dispensaries, clinics, homes, asylums, etc., including all institutions supported in whole or part by voluntary contributions, be required to report promptly to the board of health the home, age, sex, nationality, etc., with address, of every patient under observation suffering from syphilis or gonorrhea of every kind. All information is to be regarded as absolutely confidential, and will not be accessible to the public, nor will the records be deemed public records. It appears to be an excellent regulation, fair to patient and physician in the endeavor to protect the public.

A permit has been issued for the new St. Mary's Keller Memorial Hospital to be built on Hickory street, South Scranton, Pa. The cost of the structure is estimated at $44,000.

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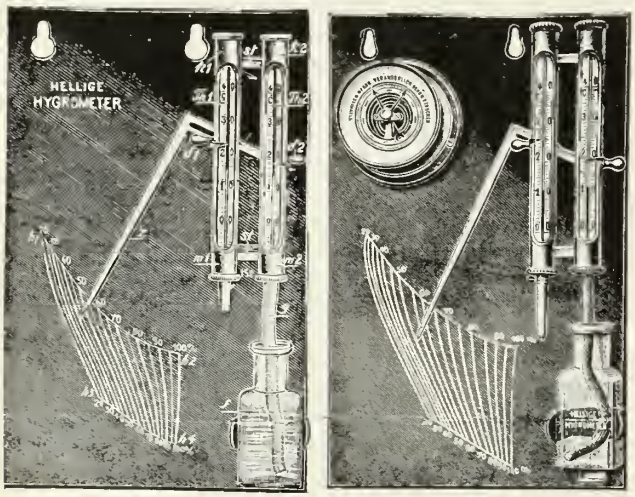
Cool-headed nurses prevented a panic when a fire, caused by the explosion of a fumigating apparatus, broke out recently in the maternity pavilion of the Hospital of the Good Shepherd in Syracuse, N. Y. There were nine women and ten babies on the floor where the fire started, but all were safely removed. In the confusion, however, the babies got mixed, and this proved another cause for excitement. The damage to the building was not serious.

NEW INSTRUMENTS *and* APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

A New Hygrometer.

Weather forecasts and hygienic consideration, especially in school rooms and hospitals, require often an accurate knowledge and forecast of the moisture in the air, usually determined by means of the hygrometer. Two kinds of such instruments are used. The first type, the "hair hygrometer," is simple and convenient, but very inaccurate. The thread will soon lose its elasticity and reliability. The second type, the "psychrometer," consists essentially of two thermometers compensated to each other, of which the mercury bulb of the one is permanently kept moist by means of a wick dipped in water. The difference between the two thermometers will, together with a few



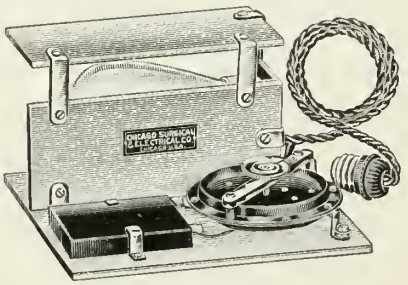
Hellige hygrometer.

other physical constants, give direct means of measuring the moisture in the air prevailing. Such instruments are exact, but inconvenient. They either require the adjustment of indices on scales with a labyrinth of crossing lines, or the percents have to be tediously computed by means of tables, with all the errors attending the same. The new Hellige hygrometer combines the advantages of both these systems, without their disadvantages. Its operation is extremely simple. It is only necessary to push the two levers d1 and d2 up to the menisci (semispherical surfaces) of the mercury columns. This will operate the long index z, which indicates direct the moisture in the air on the scale.

Electrically Heated Incubator.

The principal objection to many gas-heated incubators is the continuous watching that is required for the maintenance of a constant temperature. This is especially true where mercury regulators are used in connection with gas heaters, as it is apparent that the mercury has a tendency to oxidize, retarding its sensitiveness to thermal changes. As most hospitals have a bacteriological incubator in their laboratories, the device illustrated should prove of interest, since by using this small thermostat any gas-heated bacteriological incubator can be quickly changed into an electric.

The apparatus consists of a carbon filament lamp, an electro thermostat, and a condenser, all mounted on an insulated bracket. The entire apparatus can be placed in one corner of the incubator and the conducting cord for supplying current run through a small hole, which will generally be found in the bottom of the incubator. The



Electrically Heated Incubator.

controlling device or thermostat is, of course, the essential part of the apparatus. The diaphragm of this thermostat consists of a rubber and metal disk, riveted together and clamped securely together around its periphery between two special steel rings. As the expansion of the rubber when exposed to heat is greater than that of metal, the diaphragm will move away from the small platinum point at the end of the adjusting screw, thus momentarily breaking the electric circuit. Just as soon as the temperature drops a trifle, the diaphragm again touches the point, closing the circuit and lighting the electric lamp. Heat is thus generated until the point is reached where the expansion of the rubber will again open the circuit and the process is automatically repeated. By varying the pressure between the adjusting screws and the diaphragm, different degrees of heat in the incubator may be obtained.

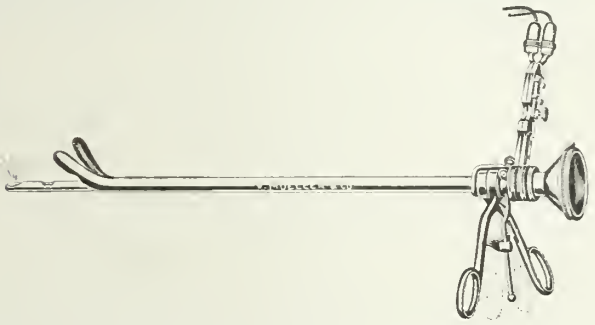
A Practical Instrument for Endovesical Operation.

BY DR. HUGH H. YOUNG, BALTIMORE, MD.

A great variety of instruments has been designed for the removal of papilloma and tumors in the bladder, but most of them were so complicated or clumsy that they were either never used at all or soon abandoned after it was found that no satisfactory results could be obtained. The operating instrument designed by Prof. Nitze, which had among other features a snare attachment, probably was used more than any of the others, but the portions that could be engaged with the snare were necessarily very small, and consequently the same procedure had to be gone over a number of times in order to remove a tumor of only fair size, and after it had been finally cut off the debris was evacuated only with great difficulty.

Dr. Hugh Young, of Baltimore, not being satisfied with the results obtained from the Nitze and other types of instruments, had his instrument makers construct several different models of an instrument which he had in mind, and, while with some of them he could work with a certain measure of success, they were not satisfactory, however, until the instrument illustrated here was finally constructed. The Doctor calls this instrument an endovesical rongeur, which consists of two parts, one working within the other and both attached to scissor-like handles,

an obturator and a lens system with electric bulb and connections. The instrument may be introduced closed, being then somewhat similar to a large Coude cystoscope. After introduction into the bladder, the obturator is withdrawn and the bladder is irrigated through the lumen of the instrument. The cystoscope is then introduced through the inner tube until it projects well into the bladder, and the closed beaks appear in the center of the field. In order, then, to keep the cystoscope from revolving with the inner tube, and to have the rongeur jaws always come together in the center of the field, the shaft of the instrument is fixed to a small rod, which runs upward and connects with the shaft of the screw which manipulates the external handles. The screw always remains midway between these two handles, and therefore is always midway between the two rongeur jaws, so that when the cystoscope has been placed in the proper position and fixed to the screw mechanism, an excellent view is obtained of the operation of the jaws in the bladder, and are thus made to invariably come together in the center of the field. This mechanism makes it possible to use the instrument with great precision, thus removing the difficulty experienced in other endovesical cystoscope forceps—namely, the movement of the object out of the field when the jaws are brought together. By means of this cystoscopic rongeur it will now be possible to do many endovesical operations which were heretofore impossible.



Dr. H. H. Young's Cystoscopic Ronguer.

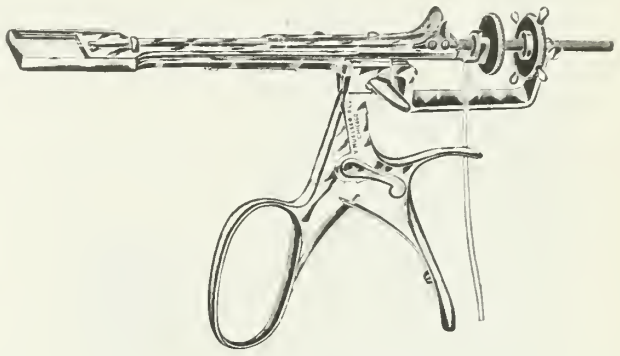
Hemostat Tonsillectome.

DESIGNED BY DR. B. D. LA FORCE, OTTUMWA, IOWA.

At a meeting of laryngologists last October, Dr. La Force presented a new instrument for the enucleation of the faucial tonsil with the capsule, and he claimed that with this instrument one may (after having mastered the technic) perform a practically bloodless tonsillectomy. Since then we have received very favorable reports from several laryngologists who have given this new instrument a thorough trial. The instrument has two new features which, as far as we know, have not been incorporated in former tonsil enucleation instruments—namely, a hemostat or crushing blade and a ligature carrier. The component parts of the instruments are a powerful handle, a hemostat with two crushing surfaces, something similar to the blade of an artery forceps, which are about 2½ mm. wide, a ligature carrier, a cutting blade, and an opening almost square in which the tonsil is engaged.

The tonsil is engaged into the fenestra of the instrument after the method of Dr. Sluder, the crushing blade forced down back of the tonsil, and all of the tissues immediately in apposition to the tonsil held firmly between the two crushing surfaces by screwing down the wheel attached to the crusher. The hemostat is allowed to remain in place from five to ten minutes.

If ligation is to be done, the ligature is placed in the groove over the end of the ligature carrier, with the ligature held firmly against the end of the carrier by engaging the ligature, after being tightly drawn, into a small spring catch. The ligature carrier is then pushed forward through the pedicle produced by the hemostat, the ligature released from the spring catch, and the ligature carrier brought back, leaving the loop on the farther side of the pedicle. The loop is then caught with forceps and brought around the handle end of the instrument, one end of the ligature passed into the loop, and the ligation of the pedicle completed by tying it either with or without a ligature knot tier made for this purpose.



Hemostat tonsillectome.

After the hemostat has been applied for from five to ten minutes, or after the ligation has been accomplished, the smaller wheel is turned to the right and the tonsil cut off, being held with forceps and removed. The larger wheel is then turned to the right and the catch on the hemostat released, so that the instrument may be removed from the throat.

An X-Ray Transformer for Therapeutic Purposes.

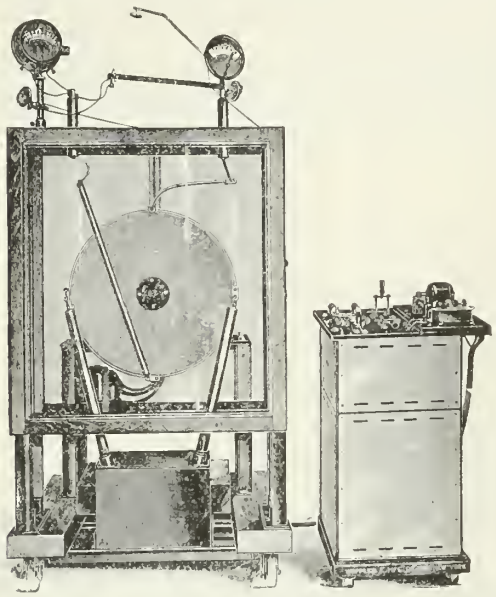
Since the deep therapy method of Profs. Kroenig and Gauss has been found very generally effective in the treatment of myoma and other diseases, radiographers have at times found it difficult to adapt their apparatus for the delivery of the proper current under necessary control, so that the technic of Kroenig and Gauss can be carried out.

The generators that are employed at the Freiburg clinic are usually coils equipped with mercury interrupters, and, while valuable improvements have been made in the construction of both coils and interrupters, the latter still offer some objections on account of the frequent cleaning required. European manufacturers have not reached the high state of perfection in building so-called interrupterless transformers as have our American manufacturers, which probably accounts for the lack of more general use of transformers abroad than in this country. There are at the present time several American-made transformers that may be successfully used for both treatment and radiographic purposes. Again, other types are not suited for both classes of work on account of the lack of control of current or from the fact that they will not satisfactorily generate the high voltage necessary in carrying out the method referred to.

The generators that are employed at the Freiburg clinic are usually coils equipped with mercury interusual transformer construction, but so designed that a current of higher voltage with less amperage may be had than with many other types. The transformer proper is placed in the lower portion of the cabinet. Above is a

synchronous motor, with rectifying switch and the customary terminals for delivering current to the x-ray tube. On the side of the cabinet are mounted the necessary starting switches.

All controlling of current is done from a control stand, which is connected to the transformer with flexible cables. This arrangement allows of the installing of the

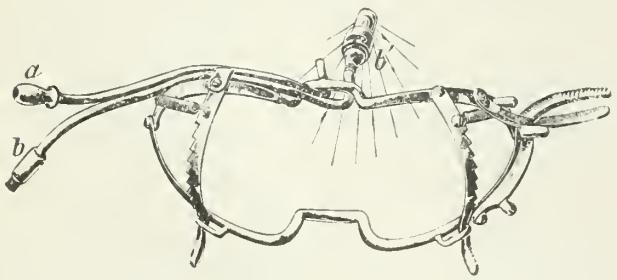


Wappler Treatment Transformer.

controller at any distance from the generator, a great advantage in many cases, such, for instance, as when a separate room is used for the transformer. A periodic interrupter is supplied to give intermittent flashes of x-ray. In addition, a winding is provided in the transformer to enable the operator to produce radiographs of high quality.

Improvements on the Whitehead Mouth Gag.

The Whitehead mouth gag has been used by the profession for many years, and, notwithstanding that many so-called improvements and new models have been offered, it is still the most popular mouth gag for operating in the mouth and throat. Recently Dr. Marschik, of Vienna, suggested that an anesthetic tube be attached, and in addition a miniature electric lamp for illumination of the



Whitehead mouth gag, as modified by Marschik. *a*, anesthetic tube; *b*, electric connection and lamp.

mouth and throat. This has been accomplished in a very satisfactory manner and in such a way that it does not in the least interfere with the field of examination or operation. The lamp socket is connected to a short flexible spiral spring, to prevent irritation of the roof of the mouth, by the lamp. So-called cold metal filament bulbs are used, consequently, there is not sufficient heat generated to annoy the patient. The whole instrument can be rendered sterile by boiling.

DEPARTMENT of NURSING

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Ethics of Nursing.

BY GEORGE E. MAY, M. D.,
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[Continued from the August number.]

The following is a quotation from the letter of a private duty nurse:

"One trouble is that things are so confusing. One time we are surrounded by the kingdoms of the world and the glory of them, and the lure and temptation, and another time we are treading the world's back stairs and trying not to see the things we meet. Then there are a few quiet, garden places, where we can feel things grow and watch children at their play, and simple folk loving one another, and where it is not difficult to remember 'One who walked in the garden in the cool of the day.'"

Whenever unpleasant or arduous duties or moments of anxiety are the lot, the nurse should regard them as so many opportunities for developing and strengthening her self-reliance, self-control, endurance, and tact. It should be a distinct pleasure and privilege to enter a family which is distraught with fear over the illness of a loved one and to pour oil on the troubled waters, to share with the physician the work of relieving the sufferer, of restoring health, saving life, and preventing disease. If there are servants in the house, she should have sincere regard for their rights and privileges. She will not do private nursing very long before she will find that a great deal depends on her proper conduct toward these necessary individuals, and many a time has it been said by people that they dislike very much to have a nurse in the house on account of her meddling with the servants. Concerning the patient's visitors during periods of convalescence, there is the greatest opportunity for the exercise of judgment and tact. The nurse can easily make the neighbors and friends of the patient believe that she is a most intensely disagreeable individual, even if she is simply trying to carry out the doctor's orders. There are many ways of accomplishing the same end results, and here, again, she must learn by experience to so tactfully handle people who do not understand the situation at all that they will not go away feeling that their friend is in the hands of an ogress. She should take care of the belongings of the patient with which she comes in contact, as well as all the household utensils. It may be that the best is none too good for the patient, and it may be, on the other hand, that the use of the best that the house affords is inadvisable under certain circumstances. A nurse will find that people appreciate economy on her part in the use of gas, electricity, linen, bedding, etc. It may be that the patient will not require all of her time, particularly if she is waiting for an obstetrical engagement. If so, there are many ways which will suggest themselves to a nurse, if she is alert,

whereby she can so profitably occupy her time in the interests of the family as to make them feel that she is not entirely an ill-afforded luxury. A little sewing, a little care of the children, saving the hard-working mother or servants a few steps, will in the long run do her no harm, and give her and the profession which she represents a much better standing in the community.

If one is feeling out of sorts, keep quiet, but never look sullen. Wit and humor should be kept well in hand and of the kind that never hurts. The nurse should particularly avoid slang expressions. Constantly refined should she be in all manner of conversation. Good breeding is probably a home product, but may be unquestionably acquired. Some of the most apparently well-bred people had very humble and almost rude beginnings in childhood, but they have constantly adopted the best which they could observe in those about them, and are now models of what might be considered well-bred persons. It is not too much to say that by her manner of meeting the patient, the family, and the patient's friends, by her methods of doing her work, by uncouth remarks, by noisy demonstrations, a nurse might very easily, with a sensitive patient, undo all that her skill had brought to the home. The touch is to be trained. Probably all nurses know that these little delicate personal traits which belong to their profession are things about which they cannot be told as to the best methods of acquiring. It is simply important for a nurse to keep them in mind, and then when she attempts to comb a patient's hair, to adjust a bandage, give a bath—in short, administer any of the hundred and one little attentions which belong to her daily practice—she will gradually begin to see that these things are done in the very best way rather than in a haphazard fashion.

In the nurse's relationship with patients and patients' families and friends, the broader and more liberal her education the less likely will she be to make mistakes. Hence, whenever she has opportunities to advise young people as to taking up the nursing profession, she should try to instill into their minds the necessity for a broad foundation. The education of the head cannot take the place of heart interest in the work, neither can it take the place of the technical training which the hospital affords, but it must be a valuable asset as time goes on.

When nursing a patient, a nurse should remember that her time belongs to the patient and the people who employ her. Her own social calls are to be put far on one side. It is very inadvisable to permit very much in the way of social visits on herself, neither should she forget that she may cause a great deal of annoyance by her promiscuous and frequent use of telephone privileges.

The nurse should never assume a dictatorial manner or show any disposition to unduly insist upon her rights and privileges so far as they affect her own comfort alone. When she has made an engagement, she should remember that to break such an obligation lightly or not to be punctual in meeting it is a very serious offense. At the very outset of her career she should determine that her word will always be kept, and that she will never yield to temptation to depart from this determination. When she has once put her name on the directory, thus signifying that she is ready to take charge of patients, she is bound to hold herself in readiness to respond to calls at a moment's notice. She should always, when going out, even for a short walk, leave specific directions with some reliable person as to her whereabouts and when she will return.

Unless she is seriously ill herself, one can imagine no circumstances under which a nurse would be justified in leaving a patient until her place had been filled. If a nurse undertakes to do general nursing, it is her bounden duty, no less than that of a physician, to take whatever case may come to her. She should never allow her personal inclinations, or personal pleasure, or personal gains to prevent her from accepting a call to a sick person who needs her.

To refuse to go to the help of a sufferer because one dislikes the isolation that must necessarily be encountered with a contagious disease, and from which one might for a time be shut out from the rest of the world and from meeting one's friends, does not enter the mind of the true nurse. In public places, like hotels, it is for many reasons inadvisable that a nurse should wear a uniform in the dining room and about the corridors. By so doing she not only makes herself unduly conspicuous, and may be subject to the embarrassment of being rudely stared at, but also causes unnecessary alarm among the other guests.

The establishment of a scale of charges which would be suitable to every case presents many difficulties, since so many different circumstances have to be considered. There are relatively few families able to expend large sums for nursing. At the same time, in the case of those who can afford it, work which requires skill and long training, and demands a great deal of mental and physical strain, calls for a good compensation. It is a good rule, however, no matter what the rate of remuneration agreed on, for the nurse to see that her services are suited to the exigencies of the case, and not rated by what the patient is able to pay. Her vigilance and her energy should know no limitations other than those of her strength and ability.

Let the nurse remember in her dealings with society as a whole, and particularly that part of it with which she comes in direct contact, that a part, and no small part either, of her duties should be educational. She is to teach, both by precept and by example, those with whom she associates how to live. She should be the living example of what is best in hygiene, in cheerfulness, in character, and in devotion to highest ideals. Who can better take up the teaching of the sex problem among the children and young girls with whom they come in contact than nurses? Or along these lines teach the great lesson of prophylaxis and preventive hygiene? There is a great deal said about this just now, and I advise nurses to make themselves competent to do it whenever the opportunity offers.

We may, if we choose, make well-directed efforts to influence some person or persons, but, whether we make any effort or not, we cannot get away from the fact that we are always influencing somebody, as well as being influenced; so, whatever we say or do or think, we must remember it is being reflected upon some one else, either those of our own profession or those in any department of life with whom we come in contact. Hence the importance of the highest ideals, and from these ideals, as sources of strength, nurses will carry out into the world that which the world has a right to expect of women of this noble and sacred calling.

From the very starting out, the nurse should plan to live economically, but comfortably. She should never go beyond her income; never go in debt; never borrow, and always try to save a little. When she saves, let her not make the mistake of speculation or be tempted by high rates of interest into schemes of which the world is full. Many persons in middle life who have earned good salaries in their professions or vocations have saved very little for the reason that they have been tempted to put their money into unsafe investments. There are always good savings

banks available, and the practice of saving a definite sum each month is a good one. Some may be fortunate enough to have friends who are reliable advisers for the deposit of savings, but we should be extremely careful whom we trust. Many well-meaning friends will give very bad advice concerning the use of money. One of the very best forms of saving for most people, particularly if they have persons in any way dependent on them, is a life insurance policy in some good company. If one does not at first feel equal to taking out a policy and paying the full premium, most companies issue now what is known as a "term" policy, which is a low-priced policy with privilege, after five or ten years, as the case may be, of changing it over without reexamination to any sort of a policy one may choose. This may not strictly pertain to the topic of this paper, but I believe it is practical, good sense.

We understand from reliable sources that there is really a little anxiety on the part of those who have the training of nurses in hand, because the flower of the profession seem to be leaving private duty for public health work, such as district nursing, tuberculosis, social service and all its branches. One can understand how this department of work is exceedingly attractive to nurses. It seems as though there was much more to be accomplished along this line because there seems to be the greatest need. The physician often feels that a large part of his work is not needed. A great many of the visits he makes might just as well be omitted so far as actual benefit is concerned, except in so far as it relieves people's minds, but in these other departments, where we have the poor and the needy to deal with, one can really see every day that one's work tells. A nurse can feel that if she does not do it, nobody else will, and, therefore, that it will not be done. However attractive this field may be, she should not forget that great middle class, who need her ministrations, and try to hold herself in readiness for service wherever the call may seem to come from.

If, as has been said, there are three times as many hospitals in this country as there were ten years ago, and they keep on in that ratio, we shall ere very many years find that nearly all the illness is taken care of in the hospital. This must be so if we are unable to get nurses for private duty and if the hospital goes on meeting more completely the needs of the public, as perhaps it is quite likely to do. It may prove to work out as we see in domestic life. A couple of generations ago almost everything was done in the home. All the clothing was made there, certainly all the food was prepared there, and now all that sort of thing has been relegated to the tailor, the shoemaker, the department store, and some of it, we are sorry to say, to the baker and sausage maker.

After all, work is perhaps the greatest blessing conferred on humanity. Dr. William B. Mayo, when asked where he and his brother got their recreation, once said, "Oh, well! Charlie has a farm down here and goes down sometimes week-ends, and I used to play tennis a little." When asked if he thought that was enough, he said, "Well, did you ever see anybody yet that died of hard work? Well, you never did! The next time you see a man who is dying from hard work, ask him whether it is work or worry. I believe that a man who loves his work and does it well will live longer than everybody else." However, this does not mean that we should neglect recreation. A nurse should cultivate a taste for the best reading, and, if she is to be a successful nurse, it would be to her advantage to cultivate the art of reading aloud, and this is by no means to be lightly considered. Florence Nightingale said she found "no use for angels without hands." If a nurse would have the truest and highest success in her work, she must have, either inborn or by cultivation, that reverence for her work and everything connected with it of which it has been said, "It is deeply rooted in the heart of humanity; you cannot root it out; civilization, science, progress, naturally change its direction. They do not weaken its force." Carlyle said, "The only happiness a brave man ever troubled himself with asking much about was happiness enough to get his work done; it is, after all, the one unhappiness of a man that he cannot work." To be only enthusiastic is of little account.

A nurse should cultivate also the art of conversation, and this doesn't mean talking shop, but there are times when, if she can engage in the conversation at the family table or with her convalescent patient, she will render herself far more attractive and increase her efficiency. One young woman who believed herself to be very awkward as a talker always prepared herself on some topic before she went out into company, and on that topic she skillfully from time to time directed the conversation; and, as time went on, instead of being embarrassed and awkward among her associates, she became at ease and helped put others in the same condition.

A nurse should be careful about the employment of her leisure time. Good books and good magazines are always within reach. Birds, in proper season, will be found most interesting objects of study and conversation. A nervous patient may be interested in this way to a greater extent than would seem possible.

And where shall we look for the inspiring thought, for the mental toning up? The nurse cannot readily get often to the best libraries and art galleries, or hear the best music, and yet she needs to be led to higher things. Always she must be giving of her mind and heart as well as hand. Therefore let her realize that the music of the birds, the trees, and the whole out-of-doors is the wonderful music of the world; that the sunset and the ever-changing lights on the hills are more beautiful than any painted picture. Go out of doors every day, and look for something worth seeing. All have not the trained eye of the botanist and the ear of the bird-lover. To walk in the open is good for mind and body, but, if one is to realize on the time thus spent, there must be joy in it. Good reading, long walks, the cultivation of happy friendships, all lead to true culture, which always makes the man or woman a more desirable and useful member of society.

Nursing is a profession in which things move rapidly. The surgical and medical treatment of a year or two ago may have become obsolete today. If a nurse would grow and develop, and keep abreast with the progress of her day and generation, she must occasionally get out into other fields and see what other people are doing. Hence she should visit other hospitals; she should take care that nursing associations are attended; write papers, and give others the benefit of her experience; then, as often as she feels she can possibly afford the time, she should do some post-graduate work. Opportunities for that are being opened up in all of our large hospitals. She can take a most interesting season in a floating hospital; go west to places like Chicago, or Rochester, with the Mayos, and acquire and bring home with her new enthusiasm and new ideas which will make her work much easier and much more interesting. Take some good journal of nursing, read it, and now and then offer a contribution; even if it is rejected, it will have done her good to write it, and, if she keeps on trying, some day she will see her name in print, and be conscious of having written something that is worth while.

There are always times in the life of a young man or woman when he or she needs an anchor. Whatever one's

ideas of a religious life may be, whatever one's creed, or early associations, one cannot afford to neglect the culture of the heart as well as of the body and mind, so some church affiliation is most desirable, and, as often as is consistent with her duties to her patient and to herself, the nurse should attend some form of religious service. Attending church service is often very difficult, indeed. It is a good plan to go to church if one can, but, if that is impossible, she should become identified with some church, become a part of its organization, and contribute a little regularly of her means, for there is no question but that the church is the greatest organization of modern life for the development of the human race. We may try to imagine ourselves in a country where no church influence has ever reached, and we shall find that we would not care to stay there very long, no matter how much there has been of culture, education, and refinement—that can never come unless the influence of Christianity has preceded it. But whether a nurse goes to church or not, or whatever her relationship to it, she should not forget to sum up at night, "What thou hast done by day, and in the morning what thou hast to do; if thy soul with thy watch, that, too, be down, then wind up both; since we shall be most surely judged, make thy accounts agree."

Nursing is really one of the broadest professions. There is almost no phase of human nature with which a nurse may not be called in contact; her sympathies and her understanding of life in the broadest sense must be equal to many occasions if she would fulfill all the requirements and possibilities which are before her; so in the care of her body, of her mind, and of her heart she must always be alert, watchful, charitable, and unselfish. Then, as Florence Nightingale said, she will fulfill to a great degree that best definition of a nurse which can be found, as always, in Shakespeare—

> "So kind, so duteous, diligent,
> So tender over his occasions, true,
> So neat, so nurse-like."

"Culture Courses" in Training Schools for Nurses.

BY EDITH KATHLEEN JONES,
Librarian at McLean Hospital, Waverley, Mass.

Ever "the old order changeth, giving place to new." If Sairey Gamp has disappeared completely below the nursing horizon, no less certainly is there rising a new ideal for the profession, a nurse who shall be not only the right hand of the physician and the surgeon and the mainstay of the disordered household, but also a congenial companion for the patient. In convalescent and mental cases, especially, the successful nurse is one who can arouse interest and attention and induce the patient to enter again into normal relations with the world.

That convalescent and mental nursing require more tact and sympathy and patience than any other sort, no one knows better than the nurse; but of the fact that often the whole long medical battle is finally won or lost through the personality of the nurse during this trying time the physician is despairingly aware. White the doctors can get plenty of nurses efficient in an emergency, capable and deft in the more mechanical aspects of their profession, they complain that it is very difficult to secure attendants with the education and resources which would render them companionable and congenial to their more highly educated and cultivated patients. Tact, sympathy, skill, and patience—these qualities are indispensable; but if to them a nurse can add a knowledge of books, an appreciation of pictures, an interest in current events, she will have at her command resources which will give her tremendous advantages in the way of entertainment and companionship; and, incidentally, she will come pretty near to being the perfect woman, whose price, according to Solomon, is above rubies.

Since the demand is for this ideal, what are the training schools to do toward supplying such nurses? In the general hospitals there has been much serious discussion of the subject, and two plans have been proposed: one, that a higher grade of education be required for entrance into the training schools; the other, that these schools add to their curriculum lectures in current events, literature, and general culture. The first plan would shut out, from both general and mental hospitals, many of our best nurses —girls who are intelligent and ambitious and eager to learn, but who have had few advantages—and it is impracticable, for the present at least, because the supply would not equal the demand. As a rule, college educated men and women do not take up nursing as a profession. There remains, then, the second scheme, that of introducing so-called "culture courses" into the training schools.

In a way, this is not a new idea. For years past more or less tentative efforts have been made in many hospitals to give their pupil nurses lectures on current events and topics of the day, but in few, if any, cases have these lectures been such an unqualified success that they have been included permanently in their curriculum. Perhaps one reason for their failure is the fact that they were usually merely desultory lectures, and not a part of the required course, for unless one has an inborn love of study, or his interest is very thoroughly aroused, he is not apt to do any more studying than is obligatory. Another cause for the nonsuccess of these lectures may be the lack of teachers within the hospital to keep the students interested, and the absence of an adequate library. Teachers may be imported—at a cost; books may be borrowed from the nearest public library, but at a certain inconvenience and much responsibility for someone, and few hospitals care to surmount these obstacles.

Taking into consideration these attempts by other training schools, when McLean Hospital contemplated giving some such courses to its pupil nurses, it counted as its greatest asset a well-selected library of more than seven thousand volumes. It had always been a matter of regret that the nurses did not make better use of the material at hand, and for ten years it had been the dream of the librarian that "somewhere, somehow, somewhen," time should be found to give instruction to the nurses in books and reading, with the view of securing to a greater extent their cooperation in the efforts of the library to get books to the patients. In the fall of 1913 it was decided to try something of the sort as an experiment, and, if it seemed successful and was appreciated by the nurses, to add it permanently to the curriculum.

As a beginning, six lectures on the development of the English novel were given in October to the women of the senior class. They were made compulsory to the women, but, because it was not thought the men would care for them and it was difficult to spare them from the wards, the men were not at first included. Although an experiment, and given by one who had had no previous experience in teaching, yet, if success is measured by awakened enthusiasm for books worth while, eagerness to do the required work, and, upon the whole, fairly satisfactory results in the examinations, this course was a success, and certainly it was appreciated. So many graduate nurses still in the hospital service and men of the senior class expressed their regret that they were unable to attend the afternoon lectures, that at their request the course was repeated in evening classes, at which attendance was

entirely voluntary. It means an eagerness to seize opportunity when men and women who have been hard at work all day on the wards are not only willing, but desirous, to give up an hour of freedom after 8 o'clock at night to attend lectures which are not compulsory.

At the end of the course the nurses, like Oliver, demanded more. As the library was particularly rich in its fine arts department, this subject was chosen for a second course, given in the spring term to the entire senior class. This, too, was fully appreciated by most of the members, and with few exceptions they did remarkably good work; in fact, the hospital felt that both courses were enough of a success to warrant giving them another year.

It is no part of the plan of this paper to give a synopsis of these two subjects as taught at McLean Hospital, or to go into details, except as they may serve as suggestions to other hospitals planning something of the sort. The courses were made compulsory because it was felt it might not be possible to hold the attention and interest of the students in any other way, once the novelty had worn off, and examinations were given because they tend to fix a subject in the mind. There was no attempt at a complete course in English literature because of the shortness of the time at the disposal of the class, but, as fiction represents by far the greatest amount of reading matter of the present day, a very brief summary of the English novel was given, from the old ballads and romances to the very latest "best seller." The required reading consisted of a few of the great books—at least one of Jane Austen, Scott, Dickens, George Eliot; either "Vanity Fair" or "Henry Esmond," "Westward Ho!," "Huckleberry Finn" or "Tom Sawyer," "The Scarlet Letter" or "The Marble Faun," "Treasure Island" or "Kidnapped;" several of Kipling's short stories; a choice of several other novels. The idea was not only to show how the novel grew and changed from century to century, but also to introduce the class to the very best writers, so that they might have an ideal by which to measure the stories of the present day. They were asked to write a short paper on their favorite author or book, and some of these essays were excellent in point of view and analysis.

The course in the history of art presented more difficulties and took much more time. Roughly speaking, it was based on Reinach's "Apollo," which many of the class purchased; but, realizing that most of the ground covered would be entirely new to many of the students, and that they would have little time for outside reading, the lectures were very carefully prepared to give all the information possible in the class; the outline of each lecture, as well as new names and terms, were written on the blackboard, and rough sketches were drawn to illustrate some points. But, most important of all, large photographs and (when it was possible to get good ones) colored pictures were displayed on the platform and passed among the students. Pictures are indispensable in a course of this sort, and, if the hospital does not own them, the public libraries and art museums will be found willing to lend their collections, or, indeed, to help in any way possible. While on the subject of pictures, it may be said in passing that the very best colored reproductions known to the writer are published in "Die Galerien Europas,"[1] and separate pictures may be purchased at 25 cents each. To those who have never seen any paintings by the great masters, a photograph conveys a very inadequate idea, and cheap colored prints are worse than nothing; but in these pictures the individual tones and colors are wonderfully well reproduced, and a good idea of the peculiar style of each artist can be obtained.

Speaking from one year's experience, it would seem worth while to devote one lecture to Greek and Roman mythology, and it certainly adds greatly to the intelligence of the students if a brief outline is given of the physical geography, history, and characteristics of each nation and their effect on their art. Since this course is meant for "general culture" rather than an exhaustive study of art, the broader and more fundamental one can make it the more the nurses will get out of it.

In a pioneer work like this, with an inexperienced teacher, it was inevitable that there should be mistakes. Perhaps the greatest of these lay in trying to give too many names and facts, too much detail, and in taking for granted more previous knowledge than many of the students had. Another year only the most important items will be given, but these will be hammered home. More frequent reviews and examinations will be given. The art course will immediately follow the literature and be extended throughout the school year, making it much less hurried.

The greatest difficulty encountered was in finding a point of contact from which to start, for, while some members of the class were well educated and had read widely and intelligently, many of them had had few opportunities. When Dickens is only a name and Jane Austen not even that; when Florence is merely a dot on the map and Rome a city in Italy where vague things once happened; when Homer is thought to have written the Arthurian romances, and Mars and Eros, Zeus, Venus and Hermes, whether under Greek or Roman names, mean absolutely nothing; when Raphael and Rembrandt are known simply as "artists" and convey no distinctive impression—where is one to begin? Yet, if the outlook is at first a little appalling, so much the greater is the need for a start. With a good library at hand, a judicious selection of books can be made and put for two or three months in the nurses' sitting rooms, where they may be taken up at odd moments, read aloud and talked over. In this way something of history and mythology may be imbibed almost without knowing it, and one may become acquainted at least with the great places and writers and artists before the courses are begun. During the course the necessary books might well be reserved in some place accessible to the entire class, so that no one person can monopolize them. It might again be emphasized that if a hospital has no library of its own, the public libraries will be glad to lend their books.

It is yet too early to speak of results from this experiment at McLean Hospital, but it is true that the nurses themselves appreciated what was being done for them and cooperated heartily. Over and over again they voiced their feeling that a new world of books and pictures had been opened to them, and that, although they were unable to remember all the details, they had acquired a certain foundation on which to build in the future. At least they became acquainted with the great names in literature and art, and knew a little of what they stood for. Moreover, interested themselves in what was to many of them a new-found world, they took their notebooks to the wards, talked over the lectures with the patients, got them interested, helped and were helped in turn by them toward a wider outlook and a larger range of interest. Nurses and patients alike went over the lectures, read the books, criticised, compared impressions, had more topics in common. More than once certain patients took exception to opinions expressed by the lecturer and quoted by a nurse, and called the former to account. This interest

[1] Die Galerien Europas; Leipzig, Seemann. The volumes are published by subscription, but they, or separate pictures, may be secured through any foreign bookseller.

was good for the patient and not at all bad for the lecturer. Although it was a little difficult to arrange matters so that the whole senior class could be spared from the wards for one hour a week in addition to the time needed for the other classes, yet, from this one year's experience, it would appear that the nurses give more to the patients in awakened interest and stimulus than they take from the wards in time. If such courses make them better companions, and therefore more efficient nurses, it would seem to be for the interest of the hospital, especially for the hospital for mental diseases, to give them at least one "culture course" with their more technical studies; while there is no doubt that better education will make them more valuable in private nursing, whether in mental or convalescent cases.

"In what precise respect, it may be asked, did Florence Nightingale 'found' modern nursing?

"Miss Nightingale was the founder of modern nursing because she made public opinion perceive, and act upon the perception, that nursing was an art, and must be raised to the status of a trained profession.

"The means by which Miss Nightingale achieved this great work were three—she brought to bear upon it the force, successively, of her example, her precept, and her practice.

"Thus on a modest scale, but with a vast amount of forethought, was launched the scheme which was destined to found the modern art and practice of nursing.

"The essential principles of the scheme were stated by Miss Nightingale to be two—(1) that nurses should have their technical training in hospitals specially organized for the purpose; (2) that they should live in a home fit to form their moral life and discipline. The scheme was carefully adjusted to these two ends."—Cook's Life of Florence Nightingale.

Feeling the need of a low-priced hospital to which their patients might be removed when desirable, twenty-two physicians practicing in the south end of Brooklyn, N. Y., have incorporated a nonstock company and established such a hospital at 704 Fourth avenue, the center of a congested district. The cost of a bed ranges from seven to twenty dollars a week, nurse and medicine included. At present there are accommodations for 30 patients at a time, and more room is being provided. The institution is known as the Harbor Hospital. Dr. William H. Maddern is president of the medical staff, and Miss May Kellington is the superintendent.

Miss Mabel Van Anker, for the last three years superintendent of Culver Union Hospital, Crawfordsville, Ind., has resigned and will take up a new line of work, the character of which has not been learned. The local press speaks highly of Miss Van Anker's services to the Culver Hospital. The new superintendent is Miss Helen Biggert, who had charge of the institution for a time about five years ago. Miss Biggert has had experience in Bellevue Hospital, New York; Cook County Hospital, Chicago, and served as a member of the faculty of the Illinois Training School for Nurses at Chicago. She comes to the Culver Union Hospital recommended as a very efficient woman.

The Hazelwood Sanatorium at Louisville, Ky., suspended operation August 1, and will be closed indefinitely. The sanatorium was established in 1907 as a charitable institution, which should not be conducted for profit. It is understood that the causes for the suspension are the lack of adequate equipment for the new building, which has replaced that destroyed by fire last year, and a continuous deficit in the operating expenses. Financial assistance was granted by the state for a time on a basis calculated to cover the deficit in operation, but, as the Legislature of 1912 failed to make any such further appropriation, the institution attempted to meet the expenses.

QUERIES *and* ANSWERS

Sewage Disposal for Sanatorium.

To the Editor of THE MODERN HOSPITAL:

For the Hampshire County Tubercular Sanatorium (Haydenville, Mass.) we are contemplating installation of a sewage disposal system. Can you give me any information regarding the efficiency of the Ashley house sewage disposal system? As we wish to commence work on a plant soon, I would appreciate a reply as soon as convenient for you.

CHAS. E. PERRY, M. D., Superintendent.

The underlying principle in the Ashley sewage destruction system seems to settle the question; the whole thing is based on the biological principle of the bacterial splitting up of proteid products. The Ashley system contemplates the introduction of air into the liquefied sewage, which has the chemical effect of transforming harmful nitrites into harmless nitrates. The principle has long been a standard principle of sewage disposition, but the advantage of the Ashley system is the ease of introduction of the elements of oxidation. The old German principle contemplated the suction of air from above ground into the tank, which increased the process of nitrification in proportion to the amount of air introduced. The Ashley system is an improvement on this.

I think you can't go wrong in adopting this system, as it seems to have been thoroughly thought out by boards of health and scientific bodies everywhere.

JOHN A. HORNSBY.

Value of Fireless Cooker.

To the Editor of THE MODERN HOSPITAL:

We have been thinking for a long time about adding some fireless cookers to our kitchen equipment. We know that these devices are almost unanimously accepted as valuable additions to a kitchen equipment, but we would like to know just exactly what they do to food.

T. W. B., Ohio.

Fireless cookers are nothing more than a modified form of thermos bottle—that is, they act on that principle—and their relative value depends on the character of insulation between the article that is cooking and the outside temperature. The only thing that the fireless cooker does is to maintain the heat in the article to which it had been brought before it was transferred from the fire into the cooker. For instance, if it is beans that you are cooking and they are boiling in water, the temperature will be 212°. Now, if you remove them from the fire and put them into a fireless cooker that is well insulated, that temperature of 212°, or approximately that, will be maintained for hours, and the cooking process will go right along as though the article were still on the fire. The August number of THE MODERN HOSPITAL, page 84, describes a fireless cooker made out of a flour box and newspapers. I knew of an excellent fireless cooker some years ago that was made of one large box about 2x4 feet and about 2 feet high, with a metal box inside of it about 1 foot wide, 10 inches high, 18 inches long. This metal

box had a lid on it. In between these two boxes was packed a great lot of prairie hay; it was a most efficient cooker. I think for a hospital you had better go on the market and buy one of the cookers already made. They will last you indefinitely, are not expensive, and are so made that your article can be kept perfectly clean all the time. JOHN A. HORNSBY.

What is Sterile Milk?

To the Editor of THE MODERN HOSPITAL:

We are trying to organize our station for preparing formula milks for sick children, and the question of sterilization versus pasteurization has come up. Will you kindly tell us just what the difference is?

CHILDREN'S HOSPITAL.

Pasteurization destroys most of the microorganisms in milk, and is supposed to destroy all those that are harmful, but it does so at the lowest temperature that will perform the work. Generally about 140° F. for twenty minutes is the temperature and time used. Nearly always there are some microorganisms, more especially the lactic acid bacteria, left alive at the end of pasteurization. The physiological character of the milk—that is, the albumin and casein—is not changed in pasteurization.

In sterilization, on the other hand, every live organism —the bacteria, cocci, yeasts, fungoids, and parasites—are all destroyed; the physiological character of the milk is changed by coagulation of the albumins and the fixing of the caseins. Milk in this form, it may be readily understood, is not desirable as a food for children sick with gastrointestinal diseases, and, when sterile milk is used for feeding, the coagulated albumins and the fixed caseins are usually broken up by the employment of some such agent as a rennet ferment. The milk in the presence of a small quantity of this rennet ferment is kept at a temperature of say 120° for about an hour. At the end of this time the milk has undergone a splitting-up process that makes it almost a predigested food, and oftentimes sick children that can take no other food whatever will thrive on these formula mixtures for several days while their stomachs are resting and recovering from the inflammatory conditions.

This question of sterilization and pasteurization is not a settled problem by any means. Some of the ablest physiological minds in the world are still perplexed about it, and the physiologists are not agreed. I think the most enthusiastic advocates of pasteurized milk claim only that it is better than bad raw milk. JOHN A. HORNSBY.

Green Pus Infection.

To the Editor of THE MODERN HOSPITAL:

We have been having some—what the doctors call—"green pus infections" in our hospital, and the doctors say it is our own fault. Is this true, and, if so, how can we help it?

SUPERINTENDENT, Southern Hospital.

I am afraid your doctors are pretty nearly right, and that it is your own fault that you have green pus infections, but your doctors ought to tell you what this infection means and how to stop it.

Green pus infection comes from the organism known as pyocyaneus. It is a nonspore-forming organism very easily destroyed, not at all virulent in its activities, and very rarely does more harm than to delay the healing processes for a few days. It is an aerobic organism requiring oxygen, or air, for its growth and multiplication, and consequently it is usually a surface or stitch infection. If you will have your pathologist give you a clean slide and you pass this through the atmosphere of your children's ward, the chances are you will pick up a lot of pyocyaneus bacteria, but, if you bring the slide in contact with the dust in the room, either from the wall or floor or ceiling, you will certainly get pyocyaneus. This is about the only organism that regular formaldehyd-permanganate of potash fumigation will destroy. The thing to do is to get your children out of the ward, and, if there is more than one ward, take one at a time; clean all the furniture thoroughly with hot water and soap; clean the floors and walls and ceiling in the same way; float your floor, if it is a wooden one with cracks in it, with a 5% carbolic acid solution. Soak your blankets in a disinfecting solution and send them to the laundry. Sterilize your pillows thoroughly and also your mattresses. Then fumigate with formaldehyd-permanganate. After you have done this, you can bring children from another ward into this clean ward, but be sure that you do it under a sterile technic. The best way to perform this is to have one nurse bathe each child, and after bathing it wrap it up in a thoroughly sterile sheet. Have her carry the child to the door of the ward and hand it to a clean nurse outside, who will receive it in another sterile sheet and take it to the clean ward, where clean bed clothing will be put on.

You need be only surgically clean to get rid of your pyocyaneus, and I would think I was thoroughly disgraced if I had pyocyaneus infection develop in a ward of which I had charge—I mean over any considerable length of time. I would have to have one or two cases before I knew the infection was present.

JOHN A. HORNSBY.

LETTERS TO THE EDITOR

Better Fire Protection.

To the Editor of THE MODERN HOSPITAL:

In your editorial headed "Fire! Fire!! Fire!!!" in the August number of your journal you ask this question, "How many hospitals have bettered their fire protection since THE MODERN HOSPITAL urged the matter for attention sixty days ago? The Cleveland City Hospital has. We began to give the matter careful attention about a year ago, and were spurred on to greater efforts by THE MODERN HOSPITAL. Among other things we have done are the following:

1, run a new pipe line from the center of the hospital grounds, with three hydrants, and connected it with the city fire lines; 2, purchased 2,000 feet of new hose, which has been installed in the different buildings and is now in good working order; 3, have put our fire pump in working order, and have a pressure of 100 pounds; 4, thirty-six new three-gallon fire extinguishers have been placed in the different buildings; 5, have improved our fire alarm system; 6, have removed iron bars from windows and have changed doors to swing with the traffic; 7, have repaired our fire escapes; 8, are now connecting one of our hospital buildings to a fire line with our pump; 9, are issuing simple instructions to all employees to be followed in case of fire, and we are not through yet.

We intend to have the best possible fire protection consistent with the conditions under which we operate. Soon we will ask THE MODERN HOSPITAL to suggest some more things we could do to safeguard our patients.

HOWELL WIGHT,
Superintendent Cleveland City Hospital.

Dr. Arthur L. Nelson, steward of the Louisville (Ky.) City Hospital for the last five years, has been appointed assistant superintendent to succeed Dr. E. E. Owen, resigned.

REVIEWS OF NEW BOOKS

A History of Laryngology and Rhinology. Jonathan Wright, M. D., director of the Department of Laboratories, New York Post-Graduate Medical School and Hospital. Second revised edition. 8vo, cloth. Price, $4. Pp. 357, illustrated. Lea & Febiger, Philadelphia and New York, 1914.

As the publishers announce in their foreword, this book will appeal to the physician for its literary and historic value rather than for its practical usefulness in every-day professional life. The physician interested in the development of the diagnosis and treatment of diseases of the throat and nose should derive an immense amount of pleasure from following the step-by-step progress that has been made in these diseases. The writer takes us back to the time of Hippocrates, Hindu medicine, the medicine of the Talmud. He quotes Horace and Homer, Herophilus, Plutarch, and Celsus, takes us through the Arabian Renaissance; choice bits in the way of prescriptions from the school of Salerno are quoted, as, for instance, this as the cause of hoarseness:

> "Oil and raw apples, nuts and eels, 'tis said,
> With such catarrhs as settle in the head,
> And leading to a long intemperate course
> Of life, will render any person hoarse."

And this as the cure:

> "Fast well and watch. Eat hot your daily fare.
> Work some and breathe a warm and humid air;
> Of drink be spare; your breath at times suspend.
> These things observe if you your cold would end."

The writer by easy stages brings us down to and discusses voice production, laryngoscopy, and the difficulties of technic. He discusses the effect of roentgenology in the diagnosis of nose and throat diseases, the effect surgery has had on these sciences, and takes up, one by one, the various diseases of the nose and throat, with a brief discussion of each.

Life and Letters of Nathan Smith, M. B., M. D. Emily A. Smith, with an introduction by William H. Welch, M. D., LL. D. Yale University Press, New Haven, 1914. Price, $3.

This attractive volume of less than 400 pages has been published in commemoration of the centennial of the medical department of Yale, and constitutes a valuable addition to the history of medicine at the commencement of the last century. Nathan Smith was one of the mighty souls bred in America by pioneer conditions, and nurtured in the hard school of poverty—men like Beaumont, Drake, McDowell, Dudley, Mettauer, Baldwin and others who became eminent teachers, surgeons and practitioners by force of character and tenacity of purpose. He was born in New Hampshire in 1762 and had little incentive to a scholarly life beyond that which comes from within, and yet he became an eminent physician, surgeon and teacher. He originated the modern treatment of typhoid fever; discovered the true nature of osteomyelitis with its attendant necrosis, practiced the reduction of dislocations by manipulation, couched for cataract, and practiced general medicine and surgery; and at the same time filled almost every chair in the medical schools which he founded at Dartmouth, Bowdoin and Yale Colleges, and thus by his vigorous intellect and unselfish devotion gave medical education in New England a mighty impetus. Through his efforts and those of his son medical colleges were established in Vermont, Philadelphia and Baltimore.

The volume is attractively printed, and well illustrated by reproductions of portraits and photographs and facsimiles of old documents. It is an important contribution to the history of medicine in the United States, and deserves to be read by all interested in its pioneers.

HUGE PROBLEM IN CARE OF EPILEPTICS.

More Than 200,000 Afflicted Need Institutional Protection —Good Beginning Already Made by Devoted Workers —Cooperation of All Agencies Urged—What the Society Is Doing.

BY OUR NEW YORK CORRESPONDENT.

The health problems confronting all engaged in the great work of alleviation and improvement of existing conditions are prone to become circumscribed to the immediate and pressing needs of today. Each and all, in their own sphere of activities, have distinctly separate, urgent problems that seemingly demand all their energies. We cannot, in this day of specialization, follow in detail the work of the great leaders in their several sociological fields; we should, however, be cognizant of the general trend of all organized efforts toward the betterment of not only this but future generations.

Epileptics in the United States today, according to conservative estimates of authorities on this dread disease, number 200,000, one to every 450 of the population. This malady "we have had with us" from the "earliest dawn of history." It may be of interest to briefly note the movements that have gradually led to the colonization plan, so admirably worked out at Sonyea, N. Y., designated as the "Craig Colony."

Germany must be given credit for being the first in the field for organized care of epileptics. As early as 1773 the bishop of Wurzburg established a home for the "very poor" afflicted with "falling sickness." This home was under the jurisdiction of Julius Hospital, and the good work was continued by the bishop's successor at his own expense. We find a few of such isolated efforts in behalf of epileptics during the eighteenth century, but the "asylum care" did not develop until near the middle of the nineteenth. About 1838 Dr. Edwin Seguin, of Paris, began his great philanthropic work for the improvement of the idiot class, and numerous asylums were provided, not only for this class, but also for epileptics.

A Protestant clergyman, Pastor John Bost, through his own love of outdoor life in the country and his firm belief in its efficacy in disease, added a cottage for epileptic boys to his colony for various classes of sufferers at La Force, France, in 1862. From this philanthropic work of Pastor Bost has gradually developed our present admirable "cottage and colony plan" for the care of these patients.

Germany is today in advance of all other countries in her work for the care of this class of unfortunates, yet even her provisions are far from adequate. The work is still being done principally by private organizations, the Government taking a hand only in the establishment of institutions in Saxony and Prussia.

In the United States we have been and still are reprehensibly backward in coming to the realization that separate institutions are essential in providing for the proper care of epileptics. Ohio was our first state to enter this new field, the momentous step having been taken in 1891 after a long, courageous, unwearied fight of over twenty years by the Ohio State Board of Charities. The next state to take action was New York, followed by Massachusetts, New Jersey, Pennsylvania, Indiana, Missouri, Texas, Connecticut, and Kansas.

The movement became certain of assured advancement by the organization, on May 24, 1898, of "The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics." The want of accumulated information regarding systems of care and treatment of

epileptics in the United States and abroad led to the publication in 1899 of "Care and Treatment of Epileptics," by Dr. William Pryor Letchworth, then president of the association, and this exhaustive work has been of the greatest value to them in their efforts "to promote the general welfare of sufferers from epilepsy—to stimulate the study of the causes and the methods of care of this disease, to assist the various states of America in establishing a proper system of care for epileptics, and to advocate the care of epileptics in institutions designed to meet their special needs." The society has earnestly endeavored to secure cooperation of scientific and benevolent forces by making eligible to membership all persons interested in general sociological questions. Officers, executive committee, and members of the association have appealed to state boards of charities, medical societies, and members of legislative bodies to cooperate in their efforts to provide better care and treatment for this class of afflicted.

BABIES OF THE FLOATING HOSPITAL.

St. John's Guild and the Helen C. Juilliard Doing Splendid "Save the Babies" Work for Greater New York—Description of a Voyage.

BY OUR NEW YORK CORRESPONDENT.

The Helen C. Juilliard, of St. John's Guild, has done valiant service for the poor babies, children, and mothers of New York City every summer since 1899. Twenty-six miles of sailing in salt air is given free to the sick children, without regard to creed, color, or nationality. These trips are made daily, except Sundays, and by making landings on the east side of Manhattan, west side of Manhattan, and in Brooklyn on alternate days, the floating hospital ministers to different sections of Greater New York. This is not an excursion boat, but a hospital, and a real factor among the many agencies in New York successfully coping with the world-old problem of infant mortality.

It is a hot sultry day in July, and at 8 a. m. the Helen C. Juilliard is at the dock at West Fiftieth street. Her crew has thoroughly scrubbed and cleansed her from kitchen to lookout. A long line of mothers, with baby in arms and two or three little tots pulling at their skirts, patiently await embarkation. Slowly the line begins to move, first passing the inspection of a physician from our wide-awake health department, who weeds out suspected contagious cases. The ship's doctor, the next barrier, quickly "tickets" babies needing immediate ward treatment and those requiring modified milk. A nurse at the doctor's elbow distributes milk tickets to the sick children, and another examines every scalp before the gangplank is crossed. In a surprisingly short time the dock is cleared, the floating hospital moves, and at 8:30 the second landing is made at West Thirty-fourth street. Here and at 9:00 o'clock at West Tenth street the same inspection occurs, and precautions taken as at West Fiftieth street. The three landings made, she starts down the bay.

We shall leave the ship's doctor and ward nurse attending the most urgent patients and pass aft to the bath room. Pediculosis cases are "yellow-ticketed" before going aboard and segregated near this large room. Their hair and scalps are immediately saturated with a solution of larkspur and bandaged for the day. They are the last to receive their baths, and the stigma of the "yellow ticket" has proved a stimulant toward future cleanliness. This disagreeable task accomplished, real pleasure lights up the nurse's countenance as the babies begin gurgling in the tubs, and the youngest children enjoy their spray in the

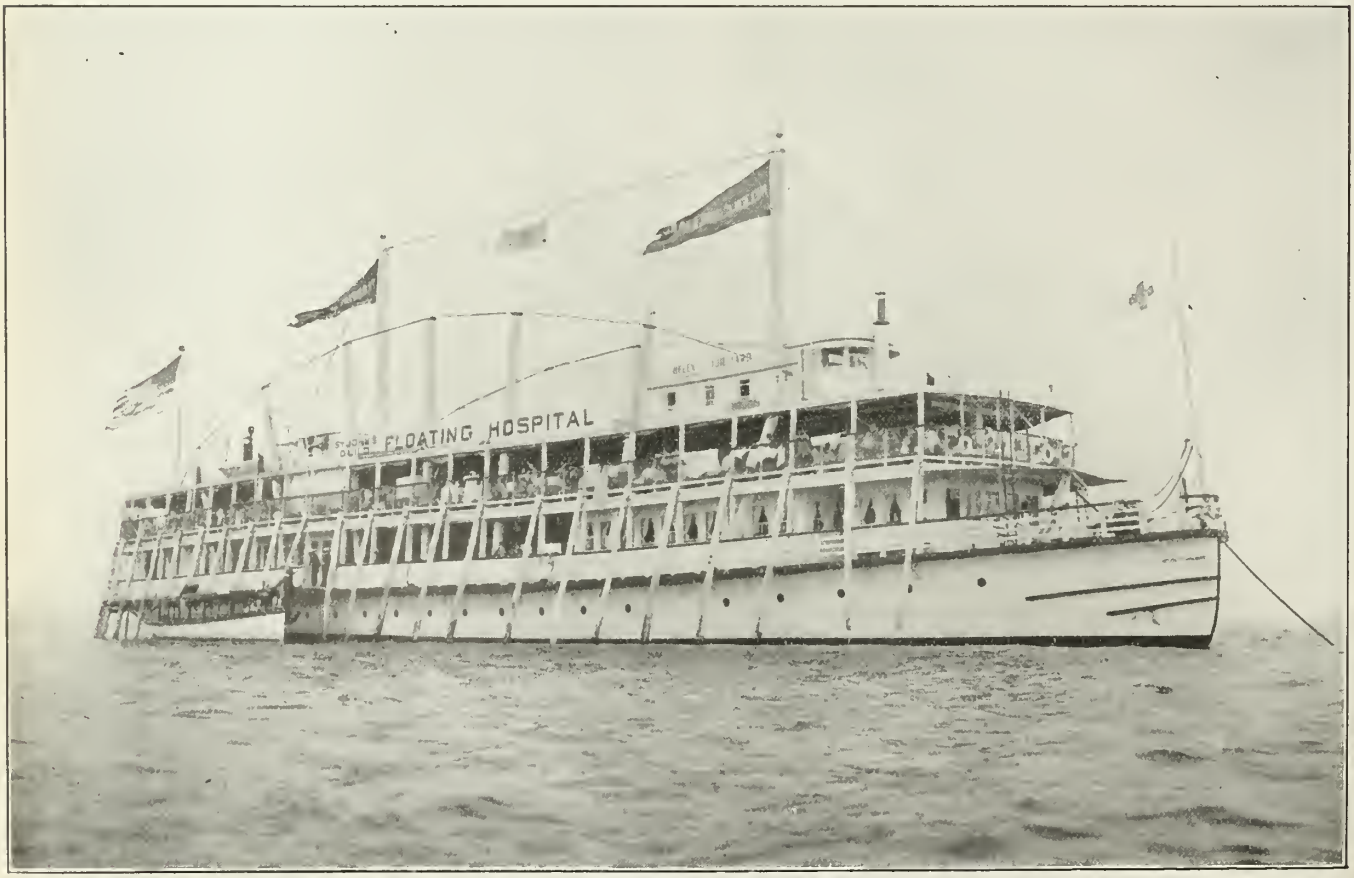

Fig. 1. Floating Hospital Helen C. Juilliard.

Fig. 2. Floating Hospital—Views on dock and on board.

curtained booths completely encircling the bath room. The first group finished bathing, it is time for the morning's distribution of milk. On the main deck are two stations, with nurses in charge, one for whole milk and the other the modified. Bottle-fed babies receive their proper feeding and sick children their quota of milk.

At midday a warm, nutritious meal is served, in the spacious dining room below decks, to the mothers and children not restricted to milk. While this meal is in progress, the floating hospital anchors off New Dorp, S. I., in full view of St. John's Guild's excellent Sea-Side Hospital featured in volume I, No. 3, of THE MODERN HOSPITAL. The guild's launch soon draws alongside and conveys the critical cases, with their mothers, to the Sea-Side Hospital for more prolonged treatment. Before the launch returns with discharged patients, the ship's doctor and his staff of nurses have been served a luncheon with the captain and other officers in their pleasant dining room on the main deck.

The afternoon is as filled with activities as the morning has been. Dispensary work is continued, the doctor referring to hospitals or milk stations cases that cannot be followed up by the five field nurses of the guild. At 3 o'clock milk is again served, and the bath room is in constant service.

Receiving rooms, large wards, operating rooms, and quarters for the doctor and nurses would add to efficiency, but the Helen C. Juilliard in her present state is rendering a service worthy of the cordial cooperation received from the Department of Health, hospitals, dispensaries, day nurseries, churches, and philanthropic organizations in touch with the poor of Greater New York.

DAY NURSERIES ARE SAVING BABIES.

One of the Prime Factors in Success is the Teaching of Mothers—Federation of Day Nurseries Doing Wonderful Work—A Hint to Hospitals.

BY OUR NEW YORK CORRESPONDENT.

It is often stated that the marvelous advance in medical science, in its broadest sense, has added ten years to the average span of life. In spite of this fact, the infant mortality shows no appreciable decline. Authorities estimate that 3,200,000 babies under 12 months die annually in countries forming the "civilized" world. No effective vital

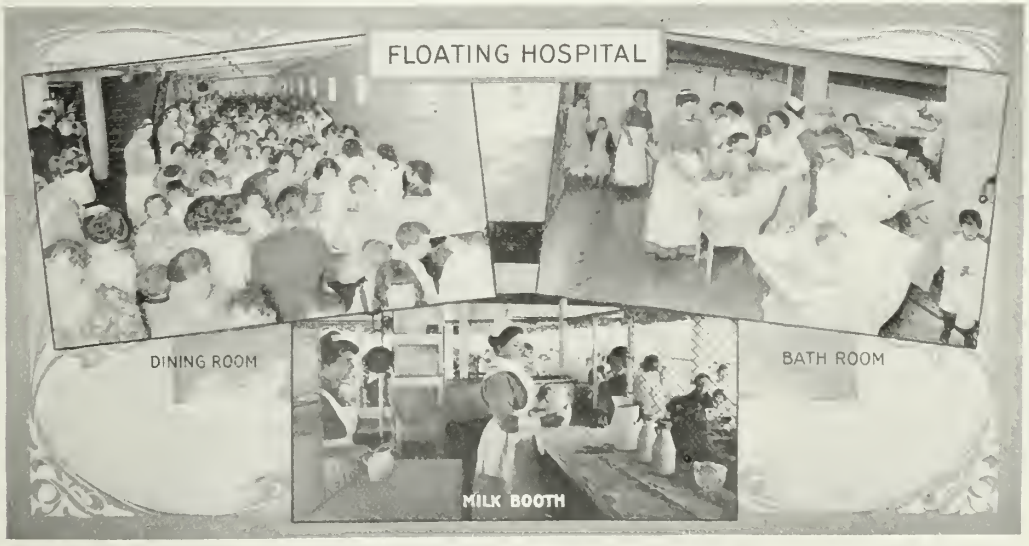

Fig. 3. Floating Hospital—Views on board.

registration laws are in operation among 55 percent of our population, but, to be conservative, at least 150 infants of every 1,000 fail to survive the first hazardous year, and double this number in some of our large manufacturing centers.

The ever-increasing complexities of our life today, with its modern social conditions, concentration in cities, and high cost of living, are gradually decreasing our annual number of births. France is not alone face to face with the problem of the total number of births being insufficient to completely offset her total number of deaths. Economic pressure and the well-known thrift of the French woman were responsible for the beginning of a system of day nurseries in Paris nearly a century ago. M. Firmin Marbeau, discovering an old French hag earning a few sous a day by looking after a number of ill-fed, wretched babies, took the first step toward the present "creche" system in France. In 1869 La Société des Creches of Paris was officially proclaimed a society of public utility, and the city began establishing a day nursery in each arondissement.

The encroachment of industrialism on the homes throughout the world has led to the establishment of day nurseries, more or less modeled after the French system, in almost every civilized country. The Child's Hospital of New York City, opened in 1854, maintained a day nursery department for the first three years. The first day nursery of the present system in the United States was established in Philadelphia in 1863 by Miss Biddle after a personal survey of the French system. This movement, spreading to our principal cities, led to the formation, in 1898, of the National Federation of Day Nurseries.

That the day nursery, born of necessity, has played a part in helping thousands of babies survive their first twelve-month, there can be no doubt. The federation is fully awake to the fact that the greatest death rate occurs among bottle-fed infants. It is doing a good work in educating mothers to a proper appreciation of this fact. When recourse to artificial feeding is a necessity, detailed instruction is given to avoid dirty bottles and nipples, too often or too much feeding at one time, impure or spoiled milk, or food not suited to the baby's age. A dietary for infants and young children, used in the New York Babies' Hospital and the New York Polyclinic, has been distributed among the day nurseries by the federation. This leaflet contains minute instructions regarding nursing, weaning, and food after weaning, the preparation of food and amount and frequency of bottle-feeding for each month of the first twelve.

These nurseries are day homes not only for infants, but for children up to 7 or 8 years of age whose mothers are forced to earn wholly or in part a living for the family. New York today is second only to Paris in the number of her day nurseries, and, however much we may deplore industrial conditions that make them a necessity, they deserve a closer cooperation of the hospitals and the medical profession.

The trend is toward education of the mothers. Every effort is being made through cooperation with other philanthropic organizations to supply the poor mother with work and sufficient funds to remain at home with the nursing baby.

Some of their buildings are models in constructive sanitation, with roof gardens and balconies, making open-air life possible for children that have scarcely had a glimpse of the sun. Daily visits by a physician could not only prevent spread of contagion, but weed out defectives among the kindergarten children, and by early segregation make a long step toward ultimate elimination of a class that are fast undermining civilization.

The New York Health Department, aware of the gravity of the problem of vaginitis among children in public schools, hospitals, day nurseries, and other institutions, has taken measures leading to a better medical control. This advance will add greatly to efficiency of day nurseries as factors in the great field of preventive medicine.

DICKENS AND THE SICK CHILDREN.[1]

After-Dinner Speech by the Author of "Little Nell" at a Children's Hospital Anniversary.

"At the anniversary festival, after the usual loyal and other toasts, the chairman, Mr. Dickens, proposed 'Prosperity to the Hospital for Sick Children,' and said:

"Ladies and Gentlemen: It is one of my rules in life not to believe a man who may happen to tell me that he feels no interest in children. I hold myself bound to this principle by all kind consideration, because I know, as we all must, that any heart which can really toughen its affections and sympathies against those dear little people must be wanting in so many humanizing experiences of innocence and tenderness as to be quite an unsafe monstrosity among men. Therefore I set the assertion down, whenever I happen to meet with it—which is sometimes, though not often—as an idle word, originating possibly in the genteel languor of the hour, and meaning about as much as that knowing social lassitude, which has used up the cardinal virtues and quite found out things in general, usually does mean. I suppose it may be taken for granted that we, who come together in the name of children and for the sake of children, acknowledge that we have an interest in them; indeed, I have observed since I sat down here that we are quite in a childlike state altogether representing an infant institution, and not even yet a grown-up company. A few years are necessary to the increase of our strength and the expansion of our figure; and then these tables, which now have a few tucks in them, will be let out, and then this hall, which now sits so easily upon us, will be too tight and small for us. Nevertheless, it is likely that even we are not without our experience now and then of spoilt children. I do not mean of our own spoilt children, because nobody's own children ever were spoilt, but I mean the disagreeable children of our particular friends. We know by experience what it is to have them down after dinner, and, across the rich perspective of a miscellaneous dessert to see, as in a black dose darkly, the family doctor looming in the distance. We know, I have no doubt we all know, what it is to assist at those little maternal anecdotes and table entertainments illustrated with imitations and descriptive dialogue which might not be inaptly called, after the manner of my friend Mr. Albert Smith, the toilsome ascent of Miss Mary and the eruption (cutaneous) of Master Alexander. We know what it is when those children won't go to bed; we know how they prop their eyelids open with their forefingers when they will sit up; how, when they become fractious, they say aloud that they don't like us, and our nose is too long, and why don't we go? And we are perfectly acquainted with those kicking bundles which are carried off at last protesting. An eminent eyewitness told me that he was one of a company of learned pundits who assembled at the house of a very distinguished philosopher of the last generation to hear him expound his stringent views concerning infant education and early mental development, and he told me that while the philosopher did this in very beautiful and lucid language, the philosopher's little boy, for his part, edified the assembled sages by dabbling up to the elbows in an apple pie which had been provided for their entertainment, having previously annointed his hair with the syrup, combed it with his fork, and brushed it with his spoon. It is probable that we also have our similar experiences sometimes of principles that are not quite practice, and that we know people claiming to be very wise and profound about nations of

[1]Colonel Fielding H. Garrison, United States Army Medical Corps, in his browsings in old medical lore, recently ran across this speech by Dickens, made at Freemasons' Hall, London, February 9, 1858, on the occasion of the anniversary of the Hospital for Sick Children. It is republished in the *Journal of the American Association*, and is reproduced here for its human interest and for its plea for the Children's Hospital.

men who show themselves to be rather weak and shallow about units of babies.

"But, ladies and gentlemen, the spoilt children whom I have to present to you after this dinner of today are not of this class. I have glanced at these for the easier and lighter introduction of another, a very different, a far more numerous, and a far more serious class. The spoilt children whom I must show you are the spoilt children of the poor in this great city, the children who are, every year, for ever and ever irrevocably spoilt out of this breathing life of ours by tens of thousands, but who may in vast numbers be preserved if you, assisting and not contravening the ways of Providence, will help to save them. The two grim nurses, Poverty and Sickness, who bring these children before you, preside over their births, rock their wretched cradles, nail down their little coffins, pile up the earth above their graves. Of the annual deaths in this great town, their unnatural deaths form more than one-third. I shall not ask you, according to the custom as to the other class—I shall not ask you on behalf of these children to observe how good they are, how pretty they are, how clever they are, how promising they are, whose beauty they most resemble—I shall only ask you to observe how weak they are, and how like death they are! And I shall ask you, by the remembrance of everything that lies between your own infancy and that so miscalled second childhood when the child's graces are gone and nothing but its helplessness remains; I shall ask you to turn your thoughts to these spoilt children in the sacred names of Pity and Compassion.

"Some years ago, being in Scotland, I went with one of the most humane members of the humane medical profession on a morning tour among some of the worst-lodged inhabitants of the old town of Edinburgh. In the closes and wynds of that picturesque place—I am sorry to remind you what fast friends picturesqueness and typhus often are—we saw more poverty and sickness in an hour than many people would believe in a life. Our way lay from one to another of the most wretched dwellings, reeking with horrible odors; shut out from the sky, shut out from the air, mere pits and dens. In a room in one of these places where there was an empty porridge pot on a cold hearth, with a ragged woman and some ragged children crouching on the bare ground near it—where, I remember as I speak, that the very light, refracted from a high damp-stained and time-stained house-wall, came trembling in, as if the fever which had shaken everything else there had shaken even it—there lay, in an old egg-box which the mother had begged from a shop, a little feeble, wasted, wan, sick child. With his little wasted face, and his little hot, worn hands folded over his breast, and his little bright, attentive eyes, I can see him now, as I have seen him for several years, looking steadily at us. There he lay in his little frail box, which was not at all a bad emblem of the little body from which he was slowly parting—there he lay, quite quiet, quite patient, saying never a word. He seldom cried, the mother said; he seldom complained; 'he lay there, seemin' to woonder what it was a' aboot.' God knows, I thought, as I stood looking at him, he had his reasons for wondering—reasons for wondering how it could possibly come to be that he lay there, left alone, feeble, and full of pain, when he ought to have been as bright and as brisk as the birds that never got near him—reasons for wondering how he came to be left there, a little decrepit old man pining to death, quite a thing of course, as if there were no crowds of healthy and happy children playing on the grass under the summer's sun within a stone's throw of him, as if there were no bright moving sea on the other side of the great hill overhanging the city; as if there were no great clouds rushing over it; as if there were no life, and movement, and vigor anywhere in the world—nothing but stoppage and decay. There he lay looking at us, saying, in his silence, more pathetically than I have ever heard anything said by any orator in my life, 'Will you please to tell me what this means, strange man? and if you can give me any good reason why I should be so soon, so far advanced on my way to Him who said that children were to come into His presence, and were not to be forbidden, but who scarcely meant, I think, that they should come by this hard road by which I am traveling; pray give that reason to me, for I seek it very earnestly and wonder about it very much'; and to my mind he has been wondering about it ever since. Many a poor child, sick and neglected, I have seen since that time in this London; many a poor sick child I have seen most affectionately and kindly tended by poor people, in an unwholesome house and under untoward circumstances, wherein its recovery was quite impossible; but at all such times I have seen my poor little drooping friend in his egg-box, and he has always addressed his dumb speech to me, and I have always found him wondering what it meant, and why, in the name of a gracious God, such things should be!

"Now, ladies and gentlemen, such things need not be, and will not be, if this company, which is a drop of the life-blood of the great compassionate public heart, will only accept the means of rescue and prevention which it is mine to offer. Within a quarter of a mile of this place where I speak stands a courtly old house, where once, no doubt, blooming children were born, and grew up to be men and women, and married and brought their own blooming children back to patter up the old oak staircase which stood but the other day, and to wonder at the old oak carvings on the chimneypieces. In the airy wards into which the old state drawingrooms and family bedchambers of that house are now converted are such little patients that the attendant nurses look like reclaimed giantesses, and the kind medical practitioner like an amiable Christian oger. Grouped about the little low tables in the center of the rooms are such tiny convalescents that they seem to be playing at having been ill. On the dolls' beds are such diminutive creatures that each poor sufferer is supplied with its tray of toys; and, looking round, you may see how the little tired, flushed cheek has toppled over half the brute creation on its way into the ark; or how one little dimpled arm has mowed down (as I saw myself) the whole tin soldiery of Europe. On the walls of these rooms are graceful, pleasant, bright childish pictures. At the beds' heads are pictures of the figure which is the universal embodiment of all mercy and compassion, the figure of Him who was once a child himself, and a poor one. Besides these little creatures on the beds, you may learn in that place that the number of small out-patients brought to that house for relief is no fewer than ten thousand in the compass of one single year. In the room in which these are received you may see against the wall a box on which it is written that it has been calculated that if every grateful mother who brings a child there will drop a penny into it, the hospital funds may possibly be increased in a year by so large a sum as forty pounds. And you may read in the hospital report, with a glow of pleasure, that these poor women are so respondent as to have made, even in a toiling year of difficulty and high prices, this estimated forty, fifty pounds. In the printed papers of this same hospital, you may read with what a generous earnestness the highest and wisest members of the medical profession testify to the great need of it; to the immense difficulty of treating children in the same hospitals with grown-up people, by reason of their different ailments and requirements; to the vast amount of pain that will be assuaged, and of life that will be saved, through this hospital; not only among the poor, observe, but among the prosperous too, by reason of the increased knowledge of children's illnesses, which cannot fail to arise from a more systematic mode of studying them. Lastly, gentlemen, and, I am sorry to say, worst of all (for I must present no rose-colored picture of this place to you—I must not deceive you), lastly, the visitor to this children's hospital, reckoning up the number of its beds, will find himself perforce obliged to stop at very little over thirty, and will learn, with sorrow and surprise, that even that small number, so forlornly, so miserably diminutive compared with this vast London, cannot possibly be maintained unless the hospital be made better known; I limit myself to saying better known, because I will not believe that in a Christian community of fathers and mothers, and brothers and sisters, it can fail, being better known, to be well and richly endowed.

"Now, ladies and gentlemen, this without a word of adornment—which I resolved when I got up not to allow myself—this is the simple case. This is the pathetic case which I have put out to you; not only on behalf of the thousands of children who annually die in this great city, but also on behalf of the thousands of children who live half developed, racked with preventable pain, shorn of their natural capacity for health and enjoyment. If these innocent creatures cannot move you for themselves, how can I possibly hope to move you in their name? The most delightful paper, the most charming essay, which the tender imagination of Charles Lamb conceived, represents him as sitting by his fireside on a winter night telling stories to his own dear children, and delighting in their

society, until he suddenly comes to his old, solitary, bachelor self, and finds that they were but dream children, who might have been, but never were. 'We are nothing,' they say to him; 'less than nothing, and dreams. We are only what might have been, and we must wait on the tedious shore of Lethe, millions of ages, before we have existence and a name.' And immediately awaking, he says, 'I found myself in my armchair.' The dream-children whom I would not raise, if I could, before every one of you, according to your various circumstances, should be the dear child you love, the dearer child you have lost, the child you might have had, the child you certainly have been. Each of these dream-children should hold in its powerful hand one of the little children now lying in the child's hospital, or now shut out of it to perish. Each of these dream-children should say to you, 'Oh, help this little suppliant in my name; oh, help it for my sake!' Well!—and immediately awaking, you should find yourselves in the Freemasons' Hall, happily arrived at the end of a rather long speech, drinking 'Prosperity to the Hospital for Sick Children,' and thoroughly resolved that it shall flourish."

DEFECTIVE DELINQUENTS—PRISON REFORMS.

National Prison Association and Associated Bodies in Many States Are Recognizing That Forty Percent of Offenders Are Abnormal—Some Details of Rescue and Remedial Work.

BY OUR NEW YORK CORRESPONDENT.

Penologists, alienists, and investigators engaged in penal work have recognized for over fifty years that a large proportion of the inmates of our prisons and correctional institutions were defective delinquents. The real extent and significance of this fact has in late years become more widely appreciated, and a new "state of mind" is rapidly developing. Today our police departments, judges, and a large part of the public look on these institutions as emergency hospitals and sanitariums for the treatment of mental and moral defectives requiring special medical and surgical attention.

Dr. F. L. Christian, in a paper read at the "Capital District Conference of Charities," March 11, 1913, states that, if modern psychological tests were applied, over 40 percent of the criminals in our state prisons would be found mentally abnormal.

The defective delinquent in our prisons today presents a "distinct type"—the product of heredity, of environment, or both. The history is of a dull, backward childhood; generally, a truant at school, he is sent home because of misconduct, commits some petty offense, and finds himself in the House of Refuge or some similar institution. Released on parole to his family, he again relapses, and for some graver offense is arrested and sent to the Reformatory.

The majority of this class are ill-nourished and rachitic; 20 percent are tubercular, 40 percent are addicted to alcohol, 39 percent have serious venereal disease, and 75 percent smoke cigarettes to excess. Morphine, heroin, and cocain complicate the problem of dealing with these defectives. Dr. Katherine Davis, commissioner of correction, in her present fight to eliminate the "dope habit" from the New York City prisons and jails, has uncovered some strange, ingenious methods devised to supply inmates with drugs. The wife of a prisoner brings him stiffly starched shirts, and the moment he is alone he eagerly chews them, thus obtaining the morphine with which the starch is impregnated. Another visit brings him an orange, and the avidity and greediness displayed in its consumption lead to an investigation. The juice has been withdrawn, transformed into a saturated solution of cocain, and again replaced through the medium of a hypodermic syringe. Fountain pens were debarred because some were found with their barrels filled with drug tablets.

The first impetus toward prison reform was given in the latter part of the eighteenth century by John Howard, the great English prison reformer. This resulted only in rendering prison conditions in the United States a little less intolerable, and the first step in real progress was not taken until 1824, the date of the building of the "House of Refuge" in New York City. The establishment of the "House of Refuge" marks the beginning of the reformatory system. In 1876 "Elmira Reformatory" was opened to separate young men, between 16 and 30, from the convicts in the state prisons, as the "House of Refuge" had withdrawn young children from the prisons and jails. Today the scope of reform has been widened to cover not only the child and "juvenile adult," but all prisoners.

One of the most potent factors in this field has been, and still is, the Prison Association of New York. This association cooperates with the National Prison Association and the different state and local societies for the protection of society against crime, the reformation of the criminal, and the protection of those unjustly accused.

We cannot here present a detailed report of the varied activities of the Prison Association, nor the comprehensive program of prison reform for which it is striving; but let us enter, for a moment only, No. 135 East Fifteenth street, the Prison Association Building. It is 9 a. m., and the pleasant library, used as a waiting room, is occupied by well-dressed men, whom no one would suspect to be "convicted felons." Several are just down from one of the state prisons, released on parole to the Prison Association, and waiting to report to the "parole agent" and receive directions regarding employment. They still have a portion of the $10 received at the prison gates, and, with a hearty handshake and assurance of continued sympathy and assistance from the "parole agent," they again enter the world of work. Across the corridor a sad-faced woman is telling her pitiful story to the "relief agent" of the association. This agent, a large-hearted woman, learns that another breadwinner has been "sent up the river," and explains to the poor, unfortunate mother that she will take immediate steps to aid in keeping the family together. The efficient general secretary, Dr. O. F. Lewis, is at his desk, attending to the morning's mail containing requests for information regarding indeterminate sentence, the parole system, the treatment of prisoners, etc., and questions such as, "Why does not the state purchase a farm and train its prisoners to be farm hands?" Perhaps a letter from abroad informs him that a foreign commission is to make a two-months' tour of American correctional institutions, and desires an itinerary and his company if it can be arranged.

In another room the two "probation officers" of the Prison Association are busy preparing their reports for judges in the Court of General Sessions.

That there is need of these prison associations for the betterment of prison conditions, and for the assistance of prisoners, there is not the slightest doubt. With the new awakening—testified to by the thousands of organizations devoted to charitable purposes listed in the "Charities Directory" of New York alone—the old regime of exploitation through contract labor, ostracism from society through prison sentence, brutality through prison abuses, illness and death through wretched sanitation, lack of proper medical care and unnatural primitive modes of prison life, is rapidly disappearing.

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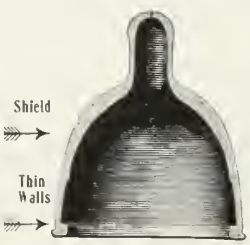

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NEWS *of the* HOSPITALS *and* SANATORIUMS

Dr. E. O. Fuller, of St. Paul, has opened a sanitarium in Hastings, Minn.

The physicians of Lockhart, Tex., are erecting a two-story brick hospital.

The Jordan Hospital at Plymouth, Mass., is being remodeled and enlarged.

A tuberculosis hospital is being erected at the Maryland state penitentiary.

Work has been begun on the $130,000 hospital to be erected at Beaumont, Tex.

A $25,000 hospital is being erected for the Nebraska Soldiers' Home at Milford.

Work has been begun on the $130,000 Catholic hospital to be erected at Beaumont, Tex.

Work on the new hospital for the Sioux Indians at Cheyenne Agency, S. D., has been begun.

Dr. Pilon, proprietor of the Paynesville (Minn.) Hospital, has recently opened a new building.

There is talk of a leper colony being established on Penikese Island, off the Massachusetts coast.

A hospital for incurables is to be erected at Point Lobos avenue and Wood street, San Francisco.

Early in the fall the Sisters of Mercy will begin the erection of a $100,000 sanitarium at Aurora, Ill.

Contract has been let for a four-story addition to the Kensington Hospital for Women at Philadelphia.

A county hospital is being erected on the grounds of the Lake County Sanatorium near Waukegan, Ill.

Plans have been approved for a $100,000 modern building for the Home for Little Wanderers in Boston.

A nurses' home to cost about $10,000 is in course of construction at the Memorial Hospital in Pawtucket, R. I.

An addition to Longview Hospital, Cincinnati, costing approximately $100,000, will be erected in the near future.

St. Paul's Sanitarium, Dallas, Tex., plans the erection of an addition which will double its capacity of 120 beds.

The Pottstown (Pa.) Hospital will receive $50,000 as a bequest from J. Gardner Muir, of that city, who died recently.

Dr. M. F. Hussey has resigned the superintendency of the Lima (Ohio) State Hospital, to resume private practice.

At Montgomery, Ala., the Sisters of Mercy are planning to build a $20,000 annex to the St. Margaret's Hospital.

The German Lutheran church society at Hampton, Iowa, has launched a campaign for a $50,000 hospital at that place.

The town of Faulkton, S. D., is to have a hospital if the plans of the local commercial club in that direction materialize.

Ground was broken in August for the new home of the Columbus (Ga.) City Hospital. A $75,000 building has been planned.

Miss Jessie F. Mackenzie, superintendent of nurses at the Mt. Zion Hospital, San Francisco, for the last six

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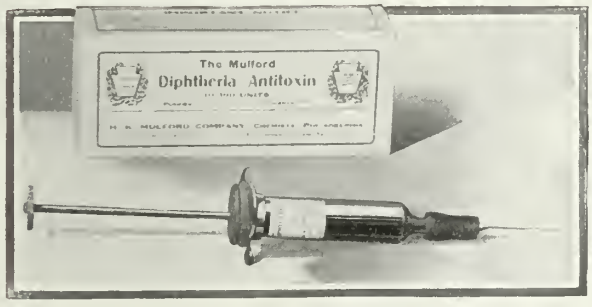

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years, has recently accepted an appointment as superintendent of the Provincial Jubilee Hospital in Victoria, B. C.

Miss Kate Williams, of Hutchinson, Kas., was recently appointed state inspector of hospital training schools for the coming year.

Accommodations for fourteen additional patients will soon be provided at the South Dakota State Tuberculosis Sanitarium at Custer.

An emergency hospital has been established at Patchogue, Long Island, to facilitate the work of Miss Frances Ashton, the district nurse.

A tuberculosis pavilion to be used for children exclusively is soon to be built for the J. N. Adam Memorial Hospital at Perrysburg, N. Y.

Bids are being invited by the Charleston (W. Va.) General Hospital for the remodeling of the building now occupied and the erection of an addition.

An emergency hospital is being built on the Michigan State Fair Grounds at Detroit, and will be completed in time for the opening of the exhibition September 7.

Thrall Hospital at Middletown, N. Y., is planning a $63,000 addition. The extra facilities are imperative, it is said, as the institution has been overcrowded of late.

A movement toward the establishment of a public hospital is being agitated in Belvidere, Ill. The Belvidere Commercial Club and the local physicians are lending support.

The city of Boulder, Colo., has appropriated funds for the establishment of a detention hospital to be operated and maintained by the hospital of the University of Colorado.

It is probable that a tuberculosis sanatorium will be built jointly by the counties of Pipestone, Lincoln, Lyons, Cottonwood, Murray, Nobles, and Rock in the state of Minnesota.

Dr. Clarence A. Potter, for sixteen years assistant superintendent of the Gowanda (N. Y.) State Hospital, has been appointed superintendent to succeed Dr. Daniel H. Arthur, resigned.

A five-acre tract of land on Lake Washington, near Seattle, has been purchased as a site for the $150,000 home for the aged provided for in the will of the late Caroline Kline Galland.

A movement has been launched at Portland, Oregon, looking toward the establishment of a joint city and county hospital, to be under the supervision of the medical college of the state university.

The plans for the $1,500,000 hospital for the insane to be erected by the state of Illinois at Alton call for an administration building, a nurses' home, and nine cottages. Quarters for 600 patients will be provided.

The cornerstone of the Pierce County Tuberculosis Sanitarium at Tacoma, Wash., was laid July 28. This is the first county sanitarium to be erected in Washington under the recently enacted law providing state aid.

Donald F. McRae, a retired lumberman and capitalist, of Alpena, Mich., has purchased what is known as the Krebs property in that city and turned it over to the Alpena Hospital Association for hospital purposes.

Contract has been let for a $100,000 addition to St. John's Hospital at Anderson, Ind. It will be a fireproof structure of brick and concrete, 212x50 feet, and four stories high. The equipment will be new and modern.

The first and main building of the Galloway Memorial Hospital at Nashville, Tenn., perpetuating the memory of the late Bishop Galloway, of the M. E. Church, South, is nearing completion. It will accommodate 150 patients.

A four-story addition to the Braddock General Hospital, Braddock, Pa., is in course of construction. With a capacity of about 60 patients, 80 to 90 have been cared for during the last year. The demand for more room was imperative.

A $50,000 service building is being erected for the Elliott Memorial Hospital at the University of Minnesota

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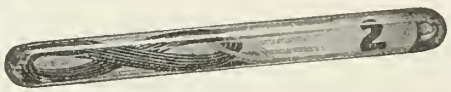

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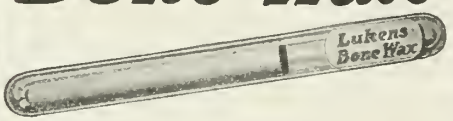

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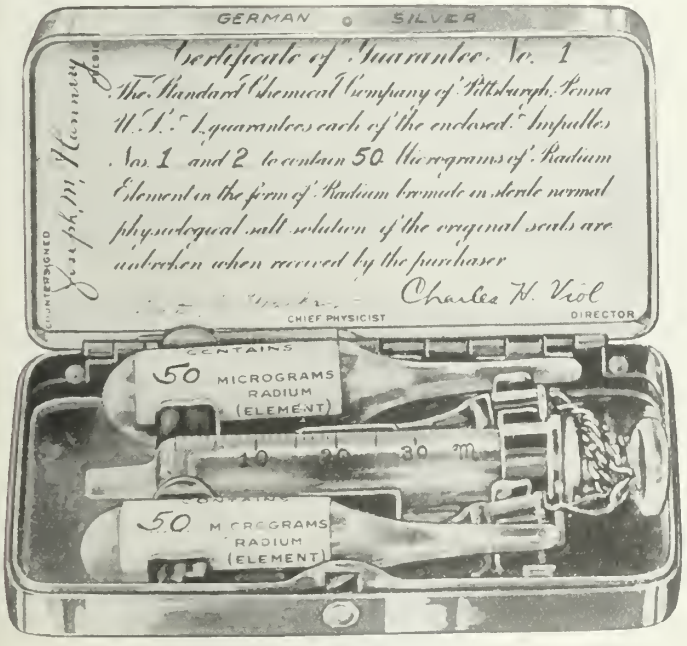
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in St. Paul. The new building will make possible the addition of 40 beds to the 136 now maintained at the institution.

Dr. T. W. Bishop's sanitarium at South Pasadena, Cal., which was destroyed by fire July 25, will be rebuilt immediately. The institution is devoted to the treatment of nervous and mental diseases.

Construction work has been begun on the first unit of the new Emanuel Hospital at Portland, Oregon. The structure will be of reinforced concrete and five stories high. When the group is completed, it will occupy an entire block.

Miss Lucy Breen, superintendent of the John C. Proctor Hospital at Peoria, Ill., for the last three years, resigned August 1. Her plans for the future have not been made known. Miss S. M. Friedlinger, assistant under Miss Breen, was appointed to fill the vacancy temporarily.

Fred L. Stevens and Sam T. Morrison, young business men of Iowa City, Ia., propose to erect a modern four-story hospital in that city, provided the local physicians and surgeons will lend their support. There are now three hospitals in Iowa City, but the promoters of the new enterprise feel that there is room for another.

A $75,000 private sanatorium is soon to be established in Philipsburg, Mont., for the exploitation of the Friedmann tuberculosis cure. While the treatment is generally condemned by physicians, the people of Philipsburg believe in its efficacy, according to reports. It is said that thirteen citizens of the town, some of whom were in advanced stages of tuberculosis, claim to have been restored to health by the "cure."

According to the annual report of the Clifton Springs (N. Y.) Sanitarium, issued recently, the gross income of the institution for the year was greater than that of any other year in its history, amounting to $357,094.13. As the aim of the sanitarium is purely philanthropic, the entire profits are devoted to benevolent work and the improvement of the plant. Over $43,000 was thus appropriated during the year.

A children's ward, which, it is reported, will be different from anything else of the kind in the East, is being erected for the Rhode Island State Sanatorium at Wallum Lake. The structure will be one story high and in the form of a cross, 116x117 feet. It will accommodate 16 boys and 16 girls. On the first floor will be sun porches, school rooms, dining hall, sleeping porches, and infirmaries. Play rooms will be provided in the basement.

The Williamsburg Hospital, Brooklyn, N. Y., after occupying the site at Bedford avenue and South Third street for sixty years, has purchased a piece of ground at the southeast corner of South Ninth street and Driggs avenue, where a modern seven-story building will be erected. The new location is regarded as an ideal one for the reason that it is in the central part of the eastern district and is accessible to all car lines.

The new Scott County Hospital at Davenport, Iowa, is now in operation. It has accommodations for 40 tubercular patients in addition to a number of emergency patients. The site and building combined cost $75,000. The hospital is said to be a model of its kind. Miss Lydia Va Lade is the superintendent. Tentatively, patients will be charged $14 a week, but, if it is found that they can be cared for at a lower figure, this will be reduced.

The increasing demand for private accommodations at the Swedish Hospital at Minneapolis is to be met by the erection of a modern four-story addition at a cost of $50,000. The new building will contain fifty rooms, most of which will have only one bed. Large balconies and a room for entertainment will be provided for convalescents. A maternity hospital, which it is said will be one of the most modern in the Northwest, will occupy the entire fourth floor.

Eugenics and sterilization stand at the head of the list of preventives of insanity, according to Dr. Will P. Bradley, superintendent of the State Hospital for the Insane at Nevada, Mo. This statement was made in a letter from Dr. Bradley to Secretary of State Roach, commenting on the publication of the result of the latter's statistical work in insanity and criminology, in which figures were given showing a startling increase in cases in the state during

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For the care and treatment of Nervous, Mental and Drug cases. Fireproof building. Rooms en suite, with private bath—impervious to noise. Seven departments permit proper classification. Nursing done principally by the Sisters. Modern Hydrotherapeutic departments. Rates $18 to $25 per week, including extras. BOTH INSTITUTIONS CONDUCTED BY THE FRANCISCAN SISTERS ON DIFFERENT SITES.

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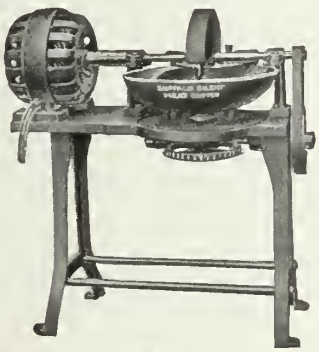

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Most valuable machine for any hospital kitchen. Cuts fine raw meats, cooked meats, and vegetables in TWO minutes.

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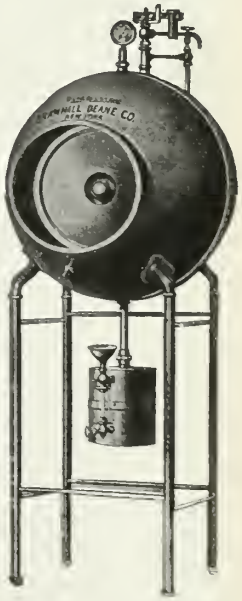

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the last four or five decades. There are other things, Dr. Bradley says, which must be done before the problem is solved, but nothing will ever accomplish much without the strict application of eugenics, segregation and sterilization.

Work has been begun on the new St. John's Hospital at St. Paul, Minn., which it was announced some time ago would be erected by the Lutheran church. The building is to be 80x100 feet, and will consist of four stories and basement. It is to be constructed of reinforced concrete and brick, and will be fireproof and modern in all respects. Sixty beds will be provided. The building now being occupied by the hospital will be remodeled for use as a nurses' home.

The twenty-fifth anniversary of the opening of the Johns Hopkins Hospital is to be the occasion of a four-day celebration this fall, October 5 to 8. Sir William Osler, Dr. Welch, Dr. Hurd, Miss Nutting, and members of the staff are to participate. There will be clinics, garden parties, and dinners. The Brady urological building is to be dedicated, and Mr. J. B. Brady, donor of that clinic, is to be given a dinner. There will also be class dinners of the alumni of the hospital.

Under a recent ruling of the Kansas State Board of Health no hospital in Kansas with less than 15 beds or 10 patients daily can operate a training school for nurses. It is said that in the event the ruling holds, probably twenty-five hospitals in the smaller towns of the state will be forced out of business. Dr. Reynolds, who conducts a hospital in the town of Horton, has brought suit in the local district court, asking for a permanent injunction against the ruling.

The Massillon (Ohio) State Hospital has recently completed a unique greenhouse. The structure is 48x21 feet at the ground level, but the floor is 6 feet beneath the surface, and its dimensions at this level are but 36x9 feet, leaving a slope of 45 degrees between the ground level and the floor. Part of the floor will be occupied by a pond in which water lilies and water hyacinths will be cultivated. In the remaining space trees will be placed until they reach a height of 16 feet.

Work is progressing rapidly on the addition to the Baptist Sanatorium at Houston, Tex. The new building is seven stories high, and will increase the capacity of the institution from 150 to 250. The addition is to be a complete hospital in itself, and will serve as an outdoor adjunct. The sixth floor will be equipped as a maternity department, and there will be a baby garden on the roof, with accommodations for fifty little ones. One floor will be devoted entirely to surgical work.

The passing of the lumberjack from northeastern Minnesota, to be succeeded by farmers and others of a more domestic temperament, has wrought many changes in that part of the state, among which may be enumerated the recent closing of St. Benedict's Hospital at Grand Rapids, which for a quarter of a century, during the height of the logging season, was liberally patronized by the big lumber concerns, who sent their employees to the institution when they were in need of hospital care.

The Toumey Hospital, founded by Mr. and Mrs. T. J. Toumey, is now the only institution of the kind in Sumpter, S. C. Some time ago it took over the Sumpter Hospital, a private institution owned and operated by four physicians. The Tuomey Hospital receives both free and pay patients. Miss Astrid Hofseth, R. N., is the superintendent. She is a graduate of the Milwaukee County Hospital at Milwaukee, Wis., and was formerly superintendent of the Willamette Hospital, Salem, Oregon.

An addition is being built to the nurses' home of the Elizabeth (N. J.) General Hospital. The new building will provide a kitchen, sewing room, and laundry, and also recreation and assembly rooms. A veranda and roof garden will afford the opportunity for plenty of fresh air. Miss Emma L. Stowe, the superintendent of nurses, writes that the addition has been needed for some time, but that when it is completed she will have every needed facility for handling a large training school class.

The directors of the State Hospital of the northern anthracite region of Pennsylvania have cut down the age limit of nurses entering the training school from twenty to eighteen years. The period of probation has been

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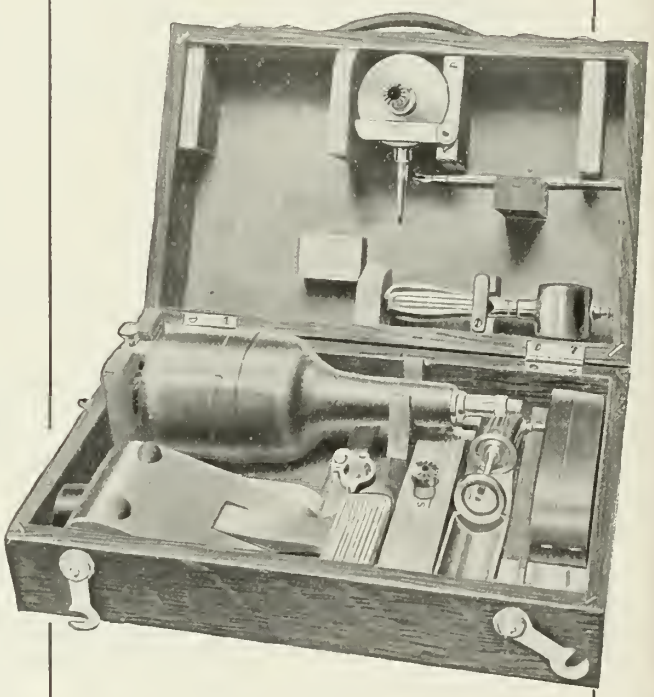
After the method of Dr. Fred H. Albee

is mending with nature's own materials.



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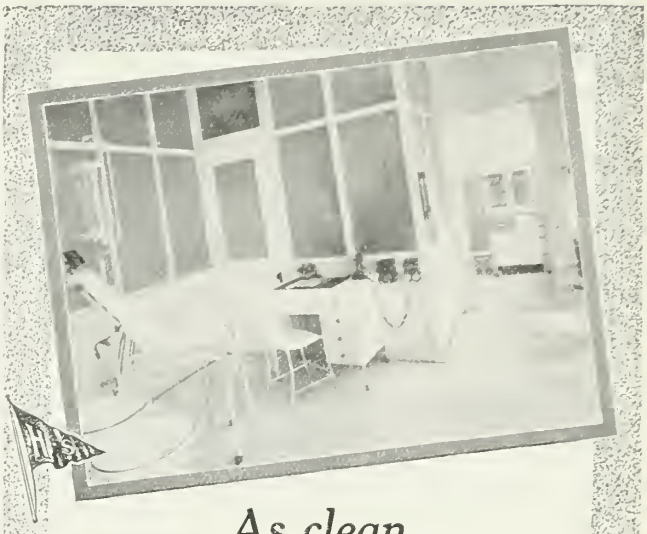

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changed from two to twelve months, but the nurses will receive their uniforms at the end of two months. Heretofore pupil nurses have received no pay at this institution the first year, but they are now being paid $5 a month. Second-year nurses get $8, and third-year nurses, $10.00.

Dr. Lewis A. Fexton, for the last six years a resident physician at the Willard Parker and Reception Hospitals in New York City, has tendered his resignation to become assistant superintendent of Johns Hopkins University Hospital in Baltimore. Dr. Fexton is a native of Tennessee, and was graduated from Vanderbilt University in 1906. He was for several years connected with the New York Board of Health. The vacancy which Dr. Fexton will fill at Johns Hopkins was caused by the death of Dr. Rupert Norton.

The Memphis (Ten.) *News Scimitar* is urging that some wealthy person become an angel to the Memphis City Hospital and donate enough money to build a nurses' home, which, it is asserted, is all that is necessary to put the institution in the "A" class. Here is an opportunity for some one to establish for himself a lasting monument at a comparatively nominal cost, and do incalculable good by making it possible for the Memphis Hospital to increase its facilities and thereby develop greater efficiency in the care of the city's sick poor.

Three of the hospitals in Pittsburgh, none of which has a reputation for extravagance, have recently admitted serving their patients with soup estimated to be worth $7 a bowl. The soup was made from seventeen game cocks captured by the police in a raid. One thousand dollars was offered for the birds, but the officials turned them over to the hospitals, who through a deplorable lack of sentiment absolutely ignored their entertaining possibilities and permitted them to suffer an ignominious end at the hands of the culinary departments of the several institutions.

Plans for a modern day nursery to be erected at Nos. 240 to 244 East Eighty-fourth street, New York, for the Church of St. Ignatius Loyola have been made public. It is said that the building will be one of the finest of its kind in the city. According to the plans given out, it will be six stories high, strictly fireproof. The front is to be of tapestry brick, with cast-iron trimmings. All the stairs and halls will be of marble and caen stone, and all the floors will be of marble or rubber tiling. The walls will be wainscoted with faience tile or salt-glazed brick, with caen stone above.

The United Hospital at Port Chester, New York, which serves Port Chester, Rye, and Harrison, recently completed a campaign for an additional endowment fund. The objective of the campaign was $100,000 or more, and the sum subscribed slightly exceeded $112,000. What is considered a large gain to the hospital as a result of this campaign consists in the deep interest that was awakened in the hospital throughout the entire community as a community institution. In the past there have been a limited number of contributors, but in this instance 3,000 people subscribed toward the fund.

Miss Elizabeth Selden has been appointed superintendent of Butterworth Hospital, Grand Rapids, Mich., succeeding Miss Elizabeth Hodgins. Miss Selden graduated from the Laura Franklin Hospital, of New York, in 1904, and holds a diploma also from the nursing and health department of the teachers' college of Columbia University. She has had a wide hospital experience, much of her work having been in executive capacities. Among the institutions with which she has been connected are the New York Hospital, Harlem Hospital, Sea Breeze Hospital, and Minturn Hospital, all of New York.

At Detroit, Mich., the Solvay General Hospital, which was built by the Solvay Process Company and has been operated mainly for the care of its employees, has been merged with the Harper Hospital. The Solvay Hospital has 50 beds, and has been caring for about 1,000 bed patients a year in addition to several thousand others who have come for treatment. The Harper Hospital has 400 beds, and it is estimated that it will care for 8,000 bed patients this year. The object in combining the two institutions, it is said, was to meet the need in the industrial center on the west side of the city for a general

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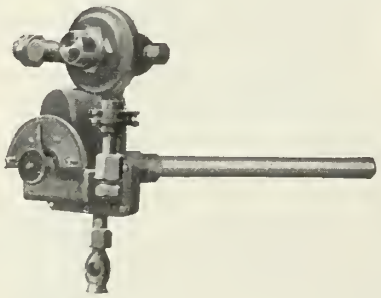

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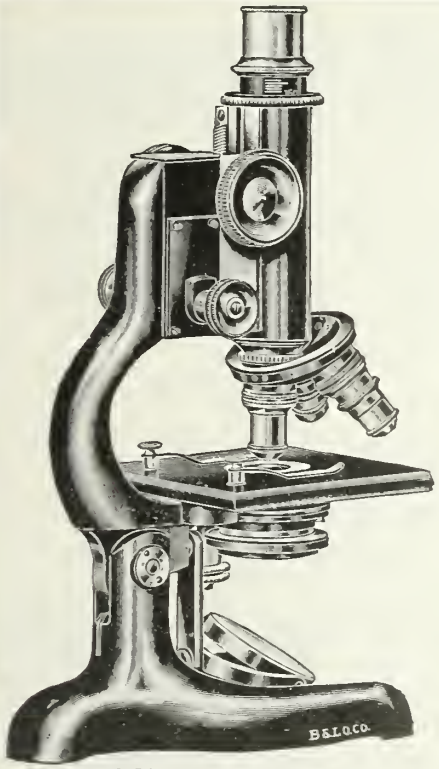

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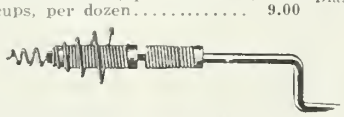

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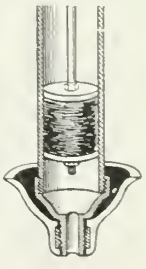

Sectional view, with cup reversed for open drains.

Allan J. Coleman, Patentee and Manufacturer, 166 N. Michigan Ave., CHICAGO, ILL.

hospital conducted on broader lines than is possible with a hospital devoted primarily to caring for the employees of one factory.

A new home is being erected for the Harrison Tuberculosis Colony at Collinsville, Ill. The building will be a one-story T-shaped structure, 185 feet wide at the front and 76 feet deep. It will accommodate 30 patients, enabling the colony to care for a total of about 50. Dr. M. W. Harrison, the president of the colony association, has long made a study of the treatment of tuberculosis, and for several years has conducted a tent colony at Collinsville, where his work has attracted much attention. A number of local physicians and two or three from St. Louis are associated with him.

The campaign recently conducted in Barberton, Ohio, a city of 15,000 people, for funds to establish a hospital resulted in $60,000 being raised. Stock will be issued to the contributors, numbering nearly 5,000, and it is believed that the hospital can be made self-supporting. The organization will be known as the Citizens' Hospital Company. A 40-bed building to cost $35,000 will be erected. Dr. J. E. Allport, who was the prime mover in organizing the People's Hospital Company at Akron and is its business manager, is active in this project also, and will have charge of the erection of the building.

A detention hospital with accommodations for 40 to 50 patients is being built jointly by the city and county at Billings, Mont. It will be a one-story structure, 50x130 feet, of cement-concrete construction, with composition floors, plaster walls, and tile partitions. With the exception of solid-slab, sanitary, enameled doors, no wood will be used on the interior. A prominent feature will be porches running the entire length of the building on either side. Each room will have a door opening directly on the porch, and the arrangement of the windows of the rooms will make it possible to open the entire side of the building.

At Salt Lake City, Utah, the county commissioners have taken favorable action on a recommendation of Dr. C. C. Snyder, county physician, to replace the temporary tubercular quarters for patients on the roof of the county hospital with a group of inexpensive portable houses that may be used the year round. The upper portions of the walls of these structures will be open and screened, but windows for closing the buildings entirely in the case of stormy weather will be provided. The patients cared for in these houses will be isolated from the main hospital, having their own kitchen, dining room, toilets, baths, etc.

A free dental clinic, said to be the only one of its kind in the country, has been opened at the Charity Hospital in New Orleans. Complete equipment has been provided and paid for by the ethical dentists of the city, and their services, as needed, will be tendered without charge. One of the principal aims of the dentists is to put the teeth of children of the poor in a state of preservation until their parents are financially able to have them properly cared for. Another purpose of the clinic is to educate the public to the importance of mouth cleanliness as affecting general health. The clinic will be open every day, except Sundays, from 1 to 5 p. m.

A home which has been maintained at Steelville, Mo., since 1902 by the A. O. U. W. for the grandchildren of John Jordan Upchurch, founder of the order, is to be sold and the proceeds devoted to some hospital project. Three plans are being considered—the establishment of a national hospital, the establishment of a national tuberculosis sanatorium, and the maintenance of a room in one hospital in every large city. Miss Almerita Morgan, of St. Louis, was instrumental in obtaining the home for the Upchurch children, and it is said that it is she who is promoting the hospital movement, now that the children are grown and self-supporting.

Pay wards will probably be established in the new Cincinnati General Hospital. Mayor Spiegel has expressed himself as being strongly in favor of such an arrangement. He is of the opinion that pay wards would attract a great many people of the middle classes who are not able to pay the rates charged by private hospitals, ranging from $16 to $35 a week, and through a rigid sense of respectability would not go to a free hospital, yet would willingly pay $7 to $10 a week. It is pointed out that there is plenty of room for a limited number of pay pa-

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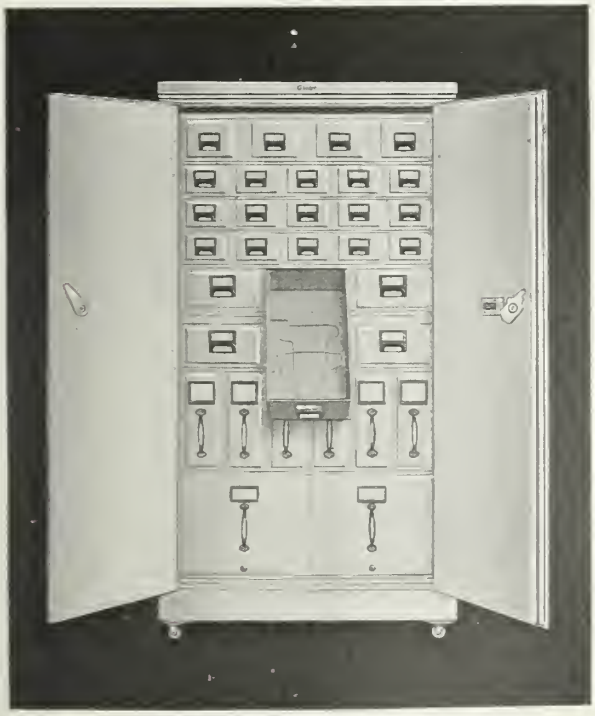

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tients as well as for all free patients who want to come. Superintendent Sanborn is said to be in sympathy with the plan.

Dr. Martin Damourette, founder of the White Cross Society, plans the establishment of a large sanatorium at Tucson, Ariz. Dr. Damourette, who was a sufferer from tuberculosis for several years, traveled all over the United States and visited Alaska, Japan, the Sandwich Islands, the Sahara desert, Egypt, and Mexico in search for the most favorable climate for the treatment of the disease, but is of the opinion that no other climate that he knows anything about is so well adapted to the purpose as that of Tucson. Dr. Damourette conducted a sanatorium at Oaxaca, Mexico, for some time, but was compelled to leave there early in the revolution owing to his sympathies for the Diaz government.

There is a movement on foot at St. Luke's Hospital, San Francisco, Cal., to inaugurate a systematic post-graduate course for nurses. This course is not intended to be one by which nurses are simply instructed in the modern methods now in use in hospitals, but it is intended primarily to instruct graduate nurses in the management and control of different departments, with the view of training those who take the course for the positions of superintendents of nurses, dietitians, hospital housekeepers, and superintendents of small hospitals. Miss Amy Elizabeth Pope, for many years connected with the Presbyterian Hospital, New York, and one of the best and most widely known educators in the nursing field, has consented to institute this course.

The following is the statement of ownership, management, circulation, etc., required by the act of August 24, 1912, of THE MODERN HOSPITAL, published monthly at St. Louis, Mo., for April 1, 1914: Editor, Dr. John A. Hornsby, Chicago, Ill., and associates as per list attached; managing editor, ——; business manager, Dr. Otho F. Ball, St. Louis, Mo.; publisher, The Modern Hospital Publishing Company, St. Louis, Mo.; owners, The Modern Hospital Publishing Company, St. Louis, Mo. Stockholders holding 1 percent or more of the total amount of stock: Dr. John A. Hornsby, Chicago, Ill.; Dr. Otho F. Ball, St. Louis, Mo.; Judge Irvin V. Barth, St. Louis, Mo.; E. M. Hornsby, Chicago, Ill.; L. M. Ball, St. Louis, Mo. Bondholders: there are no bondholders. Otho F. Ball, President The Modern Hospital Publishing Company. Sworn to and subscribed before me this eleventh day of July, 1914. (Seal) Anna H. Pfeifer, notary public. My commission expires November 26, 1915.

What is Safe Drinking Water?

Dr. Allen J. McLaughlin discusses the subject as shown in Public Health Reports for June 26, 1914. He claims that drinking water, to be hygienically safe, must contain no pathogenic bacteria. The efficiency of water purification varies, and no safe opinion can be rendered unless many bacteriological analyses are made daily and show the absence of bacillus coli. Its presence is an index of pollution with sewage, as the chances for finding it are much better than the chances of finding specific typhoid fever and other germs in the small quantity of water examined.

Bethesda Hospital Report.

The Cincinnati *Medical News*, in reference to the eighteenth annual report of the institution, invites attention to the new fireproof maternity hospital and the general scheme of ventilation. The air passes through tempering radiators and an air washer, and is raised or lowered to 70 degrees. It is driven by large fans through conduits to the various apartments. Through another large fan in the attic the air is ejected into the ventilator heads in the roof. The constantly circulating air is thus renewed eight times every hour. The heat is furnished by direct radiation, all incoming air having been warmed to room temperature. The operating and sterilizing rooms are completely equipped. The maternity hospital is able to accommodate 1,500 patients annually.

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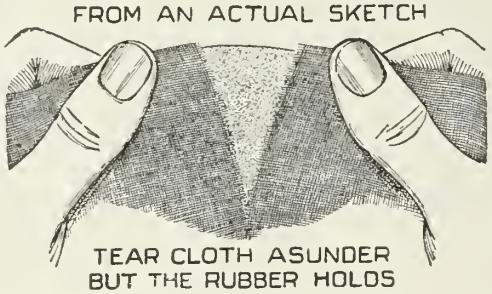

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. III *October, 1914* No. 4

THE HOSPITAL AS AN EDUCATIONAL INSTITUTION.[1]

Story of the Development of the Modern Hospital—Medical and Surgical Efficiency Spell Success—Reports Must be More Instructive—Trustees Have Serious Duty—Criticism of Some Hospital Defects.

By C. H. MAYO, M. D., Rochester, Minn.

THE development of the modern hospital has been an achievement of the present generation. To be sure, hospitals of some sort had been in existence probably as long as higher intelligence had existed in the human race. They had been developed to care for the poor and the friendless of large communities, and were patronized only by those of the better classes who lived at considerable distance and came to secure the services of a physician or surgeon of great reputation or because there was none available at their homes. Consequently the greater capacity of the hospital was in wards, and the few private rooms were for isolation and moribund patients. Hospitals were then the social meeting place of all varieties of germ life, of which danger the profession was ignorant, and hospital gangrene was very common among the injured and those operated on.

Asylums for the insane were more in the nature of prisons than hospitals—their caretakers were jailers. Although long ago the chains were struck off from the unfortunate inmates, there was but little about such institutions to give confidence that those confined therein would ever sufficiently recover to be released.

For a hundred years there had been but little progress in medical treatment. What made the great stimulus to hospital development? It was Lister's appreciation of the work of Pasteur concerning germs, their growth, the results of their activity, and the methods of destroying them. This knowledge, applied to medicine and especially to surgery, revolutionized the practice of medicine. As the science of surgery developed, a new zest was given to the study of the body and its diseases. By the application of these principles the dangers from surgery were minimized, and it became possible to study disease, infections, and growths in their varying stages in the living; their life history became known, and methods of cure were developed. While the study of the dead had taken the science of medicine far, it now advanced by leaps and bounds. It was shown that the diseases which terminated long illnesses were often to be avoided, since they were due to secondary and complicating conditions. As science and art developed in the old hospitals, new institutions sprang up like mushrooms the world over, since the applied idea was essentially institutional. The public began to appreciate the fact that better care and closer supervision could be obtained in a hospital than in a private home, and indeed that *only* in such institutions could the best care be given them.

Second only in importance to the medical staff of a hospital is its nursing corps, and much of its reputation depends on the efficiency of the nurses. In the old days outside of denominational hospitals, especially in Europe, nurses were constantly changing, and were often recruited from among the unfortunate girls and homeless women too active to warrant being supported either in a poor-farm or workhouse. This made it more difficult to secure girls of the better families and higher intelligence abroad to take up the profession of nursing. The condition is now changing in Eu-

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

rope, and within the past few years a great improvement has been made in this regard. In our newer country, not bound down by traditions, nursing has always been looked on as a noble profession, and, when hospital activity developed some thirty years ago, making such tremendous strides, the training schools were filled with the best young women of our nation. The training these women receive, coming as it does after a high school or college degree, is a liberal education in itself. The instruction in domestic science and the care of the sick, the general knowledge of disease, especially the care of contagious and infectious diseases, will add much to the development of our country in the influence exerted on it in later life by nurses and ex-nurses as members of civic bodies that demand protection for children, school inspection, and an efficient public health service which insures pure food and drinking water and perfected sanitation.

Europe is far ahead of us in the establishment of large hospitals supported by the city, the provinces, or the Government. The hospital there is considered an economic institution of great value, that the sick, injured, deformed, and crippled be as completely and quickly restored to health as possible. In all of the countries of Europe the care and protection of the individual stands far in advance of the attention devoted to agriculture. In our country we have a secretary of agriculture as a member of the cabinet, but there is no cabinet officer who has the conservation of human life in his charge. This subject rests with the public and the influence that can be exerted on public opinion by the few who have special knowledge.

While there is no national control of public health, there are hospitals in a few states which are a part of the university system, and which are for the better training of students on whose knowledge of medicine will depend the future conservation of the health of its people and also for the training of nurses. Those who live in Minnesota are to be congratulated, first, on the inherent wealth of the state and the fact that its public lands held for educational purposes were held as state property through the honesty of our state officials of an early day. The school iron lands of Minnesota are returning an increasingly great amount of money to be used for educational purposes. We have had for many years one of the finest universities, and have recently established the nucleus of a university hospital, with an efficient training school for nurses. The state superintendent of public instruction of New York has said that our university hospital training school system for nurses is the best planned in America.

Our state hospitals for the insane are of the highest order. The mentally deranged are admitted as sick patients and treated as such until they can be without question placed in the class of curables or incurables. Considering what has been done for the mentally deranged, it is but a step to see in the future the establishment of hospitals for the cure of drug habits, morphine, cocain, and the like, and of asylums for the treatment of the inebriate; inasmuch as the state licenses, as a business, institutions for his destruction, it is thereby in a sense responsible to him. Drug stores should be licensed, as they frequently supply both drugs and liquor to the mentally deficient, and only in this manner can they be effectually controlled by the possible loss of their license. In this class I would include the self-dispensing physician.

The control of contagious and infectious diseases is much easier, since special hospitals have been established for their care. Those who have been patients in these institutions have gained and disseminated knowledge of such diseases, and laws are thus more easily enforced with regard to their control, being supported by public opinion. It is fairly well understood now that such diseases should be under control and that the so-called diseases of childhood are not necessary. Many states, Minnesota among them, have established sanatoriums for the care of the tuberculous. Those who live in sanatoriums even for a time are less a menace to others because of the knowledge they acquire of disease and its causes. The public will shortly insist that bovine tuberculosis can and must be prevented.

HOSPITAL EFFICIENCY.

Hospitals are state, city, denominational, charity and private. Their responsibility to the state seems to terminate with the yearly report, which is usually of a semi-advertising character. Truthful as hospital reports may be in a general way, they are only fairly valuable as statistics. While indicating to a certain extent the character and amount of work performed, they are of far more value to those directly concerned in the work of the institution than of any special value as education to the profession. There should be a uniform system of keeping records, to be examined periodically by a hospital inspector as to their efficiency, and such inspector should be paid by the state. In the first development of an institution a low mortality is quite a necessity. Later in its life a higher mortality—far from indicating, for example, poor surgery—often indicates a greater effort by a more radical operation to secure permanency of cure; also indicates an acceptance for

treatment of those in whom disease is far advanced, rather than condemning them to suffering and death without effort at relief.

Codman, in an endeavor to make hospital reports of more value, propounds a series of questons to be asked in the individual case as follows:

"What was the matter? Did they find it out beforehand? Did the patient get entirely well? If not, why not? Was it the fault of the surgeon, the disease, or the patient? What can we do to prevent similar failures in the future?"

He divides all results of surgical treatment which lack perfection to be explained by one or more of the following causes:

"Errors due to lack of technical knowledge or skill; errors due to lack of surgical judgment; errors due to lack of care or equipment; errors due to lack of diagnostic skill."

He says these are partly controllable by organization. Failures or partial failures come from patient's enfeebled condition, unconquerable disease, and refusal of treatment, conditions which are partly controllable by public education. There are certain calamities of surgery considered as accidents and complications over which we have no control.

Given an efficient hospital, when should a patient be placed in it? First, for medical treatment, those with acute diseases should receive hospital care at once, that they may derive all of the benefits of the combined experience and knowledge of the staff of the institution. Those with chronic, incurable diseases should be in the institution only long enough positively to determine the character and extent of the disease and its prognosis, and to give instruction for the care of the individual by himself at his home or by his home physician, that he may maintain his ambulatory condition and thus his independence as long as possible. It is as unfortunate to lean on an institution for the relief of chronic disease as to be condemned to a crutch.

SURGICAL CASES.

After the diagnosis is made, a surgical patient should enter the hospital but one or two days preceding his operation, preferably the day before, unless it is necessary that he be for a time under medical observation or preparation.

To answer the question, "What was the matter and was it found out beforehand?" in the present day means efficient team work. It is practically impossible for a single individual to have the personal ability to carry out all of the technical detail of both the general and special examination; in fact, the possible complications may readily prevent a correct diagnosis, except for the efficient team work of specially trained observers. Surgical judgment and ability comes of experience. Surgical technic requires constant observation and travel if one is to keep abreast with progressive thought.

MORBIDITY.

The morbidity of patients has received marked attention in the study of hospital output and efficiency.

PERIOD IN HOSPITAL.

In the work at St. Mary's Hospital, of the approximately one thousand operations on the appendix and allied organs in the past year, the period in the hospital was barely one week. It is not many years ago that patients were confined to bed three weeks after removal of the appendix. The shorter confinement shows a saving, not to the hospital, but to the patients, of two thousand weeks during the year, or the full capacity of a 40-bed hospital for a year. Again, operations on the bile ducts and the gall-bladder formerly necessitated a stay in the hospital of three to four weeks, yet over eight hundred such cases in 1913 averaged less than two weeks in the hospital, a saving of one bed for approximately thirty-five years; and thus efficiency of output in hospitals, as in any other industry, marks progress. It is claimed by some, more especially those who conduct private hospitals, that those patients do better who are kept a long time in bed and are built up slowly. This is not, however, in accord with the facts, which are that more than a week in bed cannot be spent without a great lowering of the blood pressure, that the early ambulation of patients prevents this lowering of blood pressure and minimizes the heretofore unpreventable complication of pulmonary embolism classed as accidents of surgery. It can be shown that the convalescence is immeasurably reduced by limiting the bed-ridden period to the shortest possible number of hours, and protecting wounds by deep sutures, to be left for a week after the patient is up. As soon as possible, surgical patients should leave the hospital and go to some private home or sanatorium, where they will be surrounded only by patients similarly affected on the road to recovery, and the psychological benefit of this is of enormous advantage. While the large hospitals of Europe, with their spacious grounds, lend themselves to the outdoor life and movement of the individual, the hospitals of our country do not have such advantages as the closed grounds of these magnificent parks. Here they are commonly situated on expensive ground, in densely populated and noisy locations, where only emergency hospitals should be placed. To overcome this handicap, many of the hospitals could build convalescent homes outside of the city, and others

should sell the valuable business property and rebuild or convert it to business purposes as an income to support a modern hospital properly located.

To keep a patient in the hospital longer than is necessary is an unwarranted expense to him or an unjustified tax on those who contribute to hospital expenses, besides keeping some other needy patient from being cared for.

Hospitals are seldom conducted on good business principles. Some members of the board are placed there because they will contribute or are good money getters, and others because of influence. Too often these members are like the business directors who don't direct. When hospitals can be standardized and a Taylor system of efficiency of management be secured, a wonderful improvement will ensue.

Surgical judgment is born of experience in most instances, but could be more quickly and safely acquired if some large hospitals would but give the after-results of certain operations, as, for instance, fixation of the uterus in young married women. This would probably indicate, not the discarding of the procedure as a method, but of its non-use in certain years of life. Why should not the sex organs of the female receive the same consideration for preservation as the male in neurasthenia? Has the average physician ever considered how few questionable procedures are made upon the external body? They are mostly hidden conditions, and often buried. A hospital should be responsible for correct records of all operations and treatments of patients who enter the institution. This should be made by the superintendent, registrar, or intern, and kept, not for public inspection, but as a record for increasing hospital efficiency. This does not prevent the surgeon from also keeping private records. Such a record, with the percentage of success and failure, and the answers to the questions propounded by Dr. Codman, would give valuable information to be placed before a board of directors, and might lead to the question of why certain surgeons make so high a proportion of curettements and what necessitates such treatment. The report showing the mistakes in diagnosis, and the number of patients who came back for a second operation because the first did not benefit, would be instructive. The number who have evidently more than one trouble, the presence of which could so easily have been found by observation at the time of the first operation, becomes a serious matter when we think of the lost time, double risk, and burden of expense thrust unnecessarily on such patients or on the community.

The character of many operations would lead the board to suspect certain members of the staff of securing much of their business by a secret division of fees. With directors who direct, great improvement could be made by dropping members from the staff or advising others to take special courses in medicine or surgery. It is to be hoped that within the next five years the College of Surgeons of America will do mucn to raise the standard of American surgery, and make a high standard of efficiency and honesty the ideal of the student of medicine.

ST. LUKE'S HOSPITAL, JACKSONVILLE, FLORIDA.

Group of Buildings Laid Out for Southern Climate—Special Conditions Had to Be Met—Some Unique Features in Architecture—White and Colored Patients Separated—Isolation Follows Pasteur Institute.

By EDWARD F. STEVENS, Architect, Boston.

WITH nearly two blocks of ground as a building site and the southern climate as a factor in the case, it was deemed best to adopt the pavilion plan for St. Luke's Hospital, Jacksonville, Fla. The buildings were designed after a careful study of the modern German institutions, most of which were built with pavilions, and many of the ideas in them were incorporated into this group.

The site is well away from the city, yet quickly reached by trolley or motor. There is a boulevard on one side of the property, a park on another, and a small stream running through a third. These conditions enable the hospital to control its light, air, and sunshine permanently.

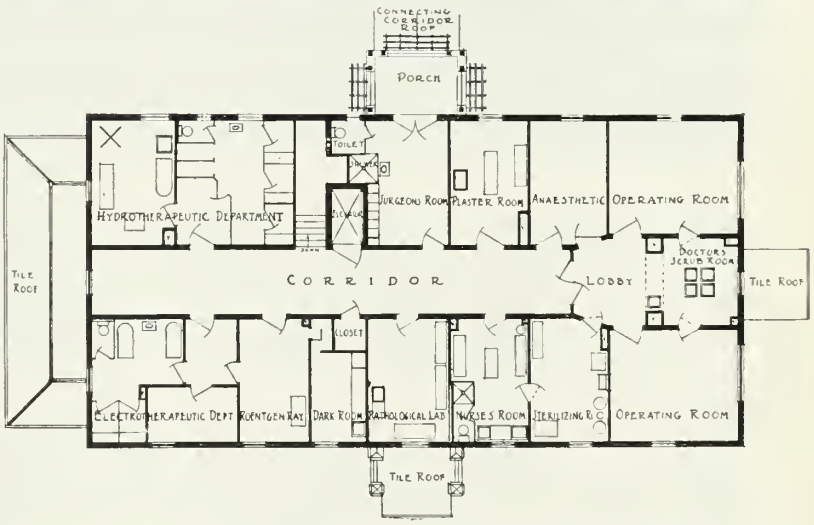
Jacksonville has had a phenomenal growth, having doubled its population in ten years. It is still growing rapidly, and this fact was considered in planning for the new hospital. The administration portion has been built complete, and made of sufficient size to care for a number of additional pavilions for patients. At the same time endeavor was made not to have it too unwieldly for present uses.

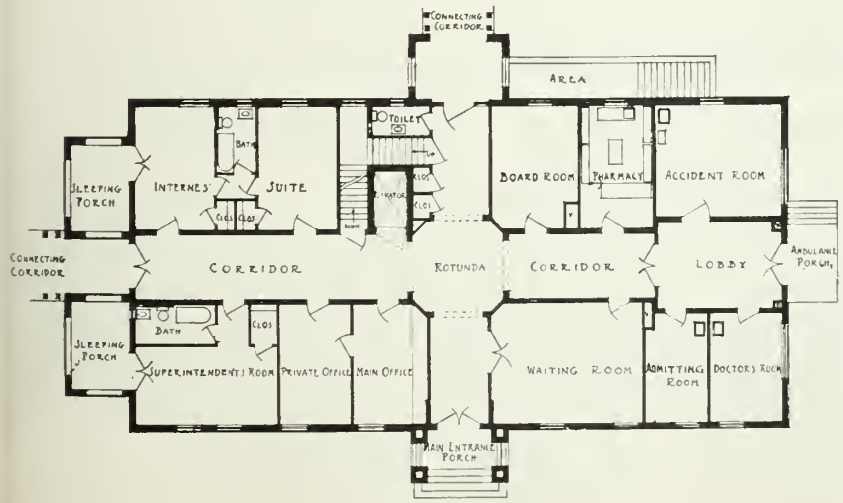
There are at present eight buildings, only four of which house patients. By reference to the plot plan it will be seen that there is space for four to six more buildings, all readily accessible to the present administration and service. The buildings just finished accommodate 110 patients, and 300 will be taken care of eventually.

In designing the exterior no attempt was made to produce an imposing architectural effect. The money was spent on the inside, for the comfort of the patients and the convenience of the workers. There is a pleasing effect, however, afforded by the group of buildings with their gray stucco walls, red tile roofs, dark-green blinds, and deep balconies, set against a background of trees hung with moss and in contrast to a foreground of glaring shell roadway.

The group plan shows the general layout. The administration building stands at the end of a street, and is approached by a semi-circular walk and drive; behind it are the service building and power house. To the right is the nurses' residence, quite detached, and back of that the two isolation pavilions. To the left is the private pavilion (for paying patients) and the public pavilion (for non-paying). The service drive comes in at the back. The ambulance entrance is at th eright of the administration building.

The administration building is the highest of the group, the nurses'



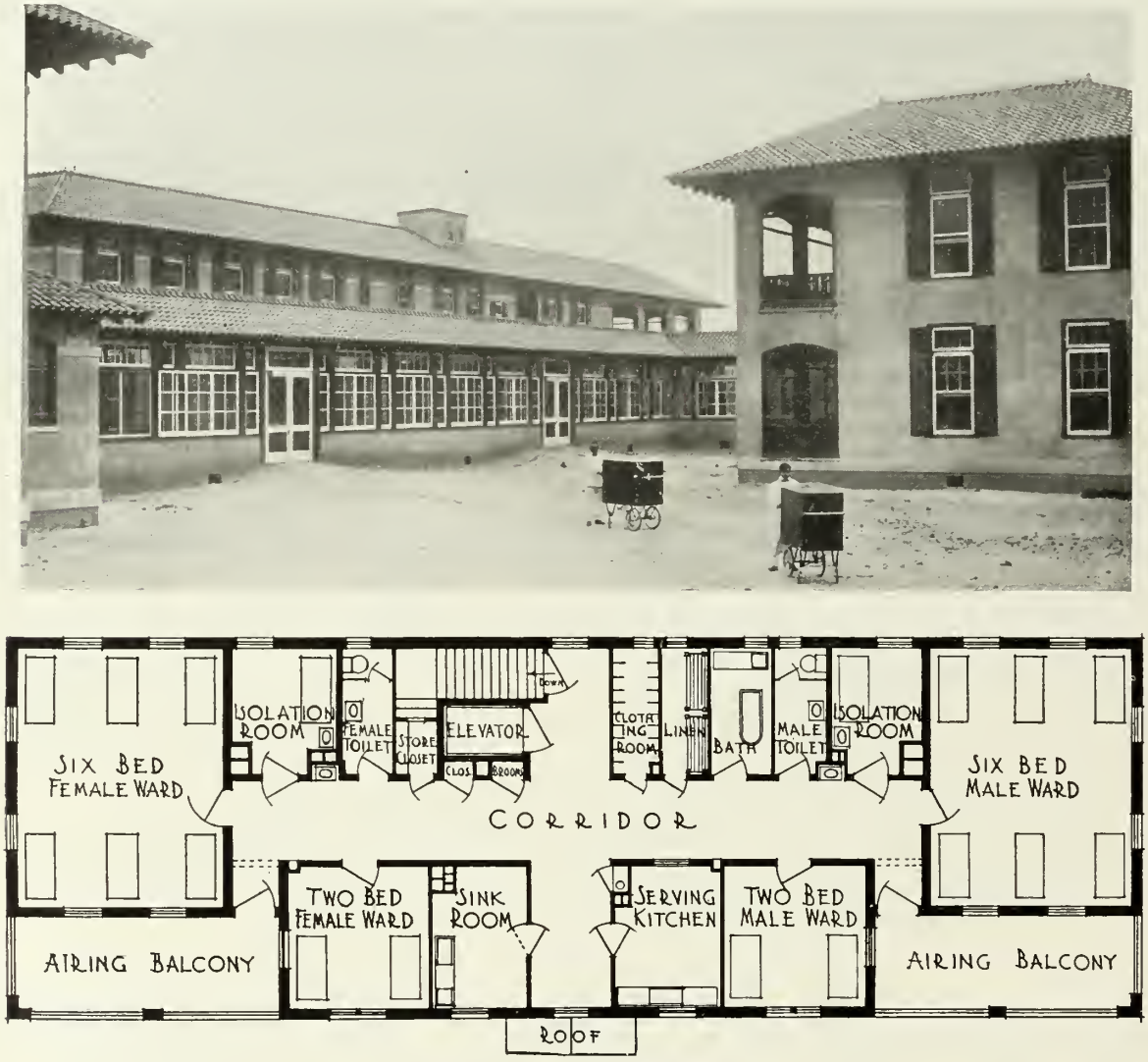


St. Luke's Hospital—Administration building and typical floor plans.

residence and the private pavilion, which flank it, appearing much lower by reason of their long, straight lines. Corridors run from this to the service buildings and to the pavilions. Future pavilions will connect with an extension of this latter corridor. The ambulance entrance is out of sight of patients, as is also the entrance for the morgue at the back of the building. Every patient and visitor must pass the office before going into the hospital proper.

In the sterilizing room is a water still, with heating and cooling tanks. Between this and the operating room is a window, in front of which the instrument sterilizer is set, so that the nurse may open it with a pedal and reach into it from the operating room, a saving of time and steps.

The private pavilion has 28 single rooms, four double rooms, and two 3-bed wards, accommodating 42 patients in all. There are four suites with baths, the bath being entered either from the



St. Luke's Hospital—Public and private pavilions, showing connecting corridors; typical floor plan of public pavilion.

On the first floor are the offices, general waiting room, board room, pharmacy, accident and admitting rooms, and the superintendent's and interns' quarters. At the south end of the second floor are the medical treatment rooms and the roentgen ray department and laboratory. At the north end are two operating rooms, scrub-up alcove, sterilizing room, nurses' work room, anesthetic room, surgeons' room with its own balcony, and plaster room for the large orthopedic work which the hospital does.

hall or from the room on each side, making a very flexible unit.

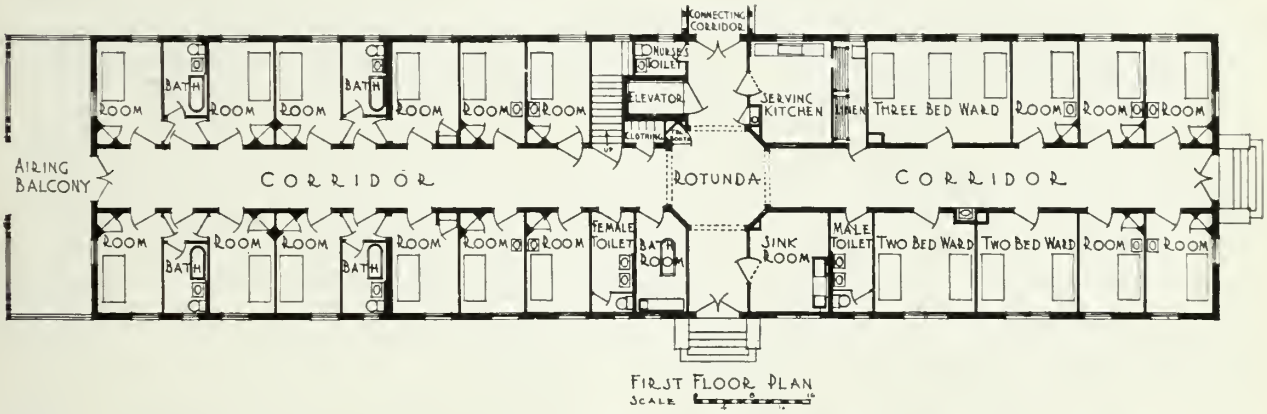
At the end of the lower floor of this building is a broad balcony extending its full width, the actual floor space being 12x40 feet. On the upper floor is an outdoor ward or roof garden 40 feet square, screened in, roofed over, equipped with lights, nurses' calls, couches, hammock, steamer chairs, low tables, etc., so that it may be used for either daytime lounging or continuous open-air treatment. This outdoor ward is one of the fea-

tures of the hospital which most impresses patients and their friends. The standard set for both this and the public pavilion was that there should be space enough on the balconies to accommodate at one time all the patients in the hospital, at least half being out in their beds. To this end, also, all doors are wide enough to admit a bed and all beds have large, easy-rolling wheels.

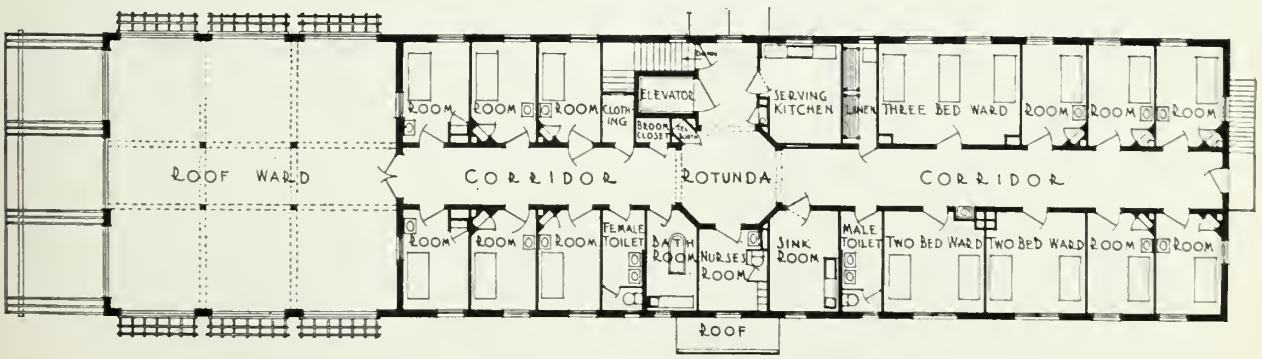
In planning buildings to be occupied by patients, all utilities have been placed in the center, so that nurses may work toward the ends, saving time and steps. This also leaves the pleasant corner rooms available for patients, and keeps odors and noises away from the sick.

The nurses' station is at the center of the corridor, where the connecting corridor enters, and overlooks the stairway, elevator, serving kitchen, and sink room. A head nurse sitting here may observe the whole building almost at a glance.

Good-sized sink rooms and serving kitchens



FIRST FLOOR PLAN
SCALE



SECOND FLOOR PLAN
SCALE

St. Luke's Hospital—Private pavilion and floor plans.

have been provided, since these two places are the center of the nurses' chief activities, and must afford working space for several people at one time. There are separate toilets for men, women, and nurses' and ample bath room, a sink with large drain board and shelves above for taking care of patients' flowers, a large linen room, an extra closet for blankets, another for clothing, a telephone booth, and a locker and dressing room for special nurses.

The stairway is shut off by doors at top and bottom, so that noises may not travel from one floor to the other.

There are no call bells, the "silent signal" system being used instead. All private rooms have telephone connection.

Two isolation rooms are provided on each floor, to be used for delirious or otherwise disturbing patients. The walls of these rooms are soundproof, there are double doors, with a removable grille at the window. These rooms and the public pavilion are of fireproof construction, being of tile and concrete. The floors of corridors and utility rooms are of terrazzo, those in the patients' rooms being of linoleum cemented to the concrete. The floor is sunk slightly below the edge of the coved base, so that the floor and linoleum finish flush.

There are no door or window casings, the frames themselves constituting the finish, which is flush with the plastering. The coved base is also flush with the plastering, being set before this work is done. These features reduce cleaning to a minimum. All corridors are 8 feet wide.

Each room has a closet, built only as wide as its door, so that there are no front corners to catch dirt. The door is cut short, and a vent is provided at the top of the closet, affording circulation of air through the contents. The shelf is set an inch away from the wall. These details give a closet very easy to keep clean.

The doors, which make up the bulk of the visible woodwork, are of birch, stained a soft gray. The wood furniture matches them.

There is a vacuum cleaning machine in the basement of each building, away from patients' rooms. Outlets for the attachment of the cleaning hose are provided on each floor.

The public pavilion consists of four units exactly similar, each consisting of a 6-bed ward, a 2-bed ward, an isolation room, and an airing balcony. In one unit the isolation room is used for surgical dressings. The upper floor will be for men, and the lower for women and children.

The utilities are placed in the center of the building, and are almost exact duplicates of those in the private pavilion. There is in addition a locker room for patients' clothing.

In equipping these two pavilions, attempt was made to provide all labor-saving devices which were practical. Closed-in, heated food cars convey the food from kitchen to serving rooms, where steam tables keep it hot till served. Local incinerators, purposely small, are built in each sink room, so that all garbage and waste may be promptly destroyed. The refrigerators for food have one-piece porcelain linings. There is a box for crushed ice in each sink room, the large crusher being in the service building. There are utensil sterilizers on each floor, gas plates for boiling instruments, etc.

The service building has in its basement store rooms for all sorts of supplies, and toilets and locker rooms for servants. It also contains the refrigerating plant, which cools the large kitchen refrigerators and provides ice for all the building.

On the first floor is the steward's office, next the unloading platform, where all supplies are delivered, one person being responsible for receiving, checking, storing, and giving out. This office controls the entrance to the basement, kitchen, laundry, dining rooms, etc.

The three-compartment refrigerator is immediately off the entrance for supplies and next the main kitchen. The steward's office has a large window opening into the kitchen, through which store room supplies may be delivered, orders given, and general supervision had.

The main kitchen occupies one corner of the building, and has a monitor above for additional light and air. Supplies enter at the right, are cooked in the center, and are served from the left or corridor end, giving no cross currents in the work. The fuel used is gas. The cooking apparatus is set in the center of the room. The equipment includes vegetable steamers, jacket kettles, fixed and tilting, electric vegetable peeler, meat-chopping machine, bread and meat slicers, etc. The kitchen steam table and urns do double duty, caring for articles waiting for patients' food cars, and serving the staff and nurses' and servants' dining rooms.

Across the corridor is the special diet kitchen, equipped with large cabinet range, table with steam bath, refrigerator, supply cupboards, etc. Near it is the so-called pastry room, where all desserts, hot breads, etc., are prepared. This room has its own refrigerator, gas oven, and jacket kettle.

The food cars come in at the broad entrance of the kitchen, are loaded with the ordinary items of food from the steam table, get desserts from the pastry room, stop at the diet kitchen for special articles, and are complete before they leave the building, without retracing their steps.

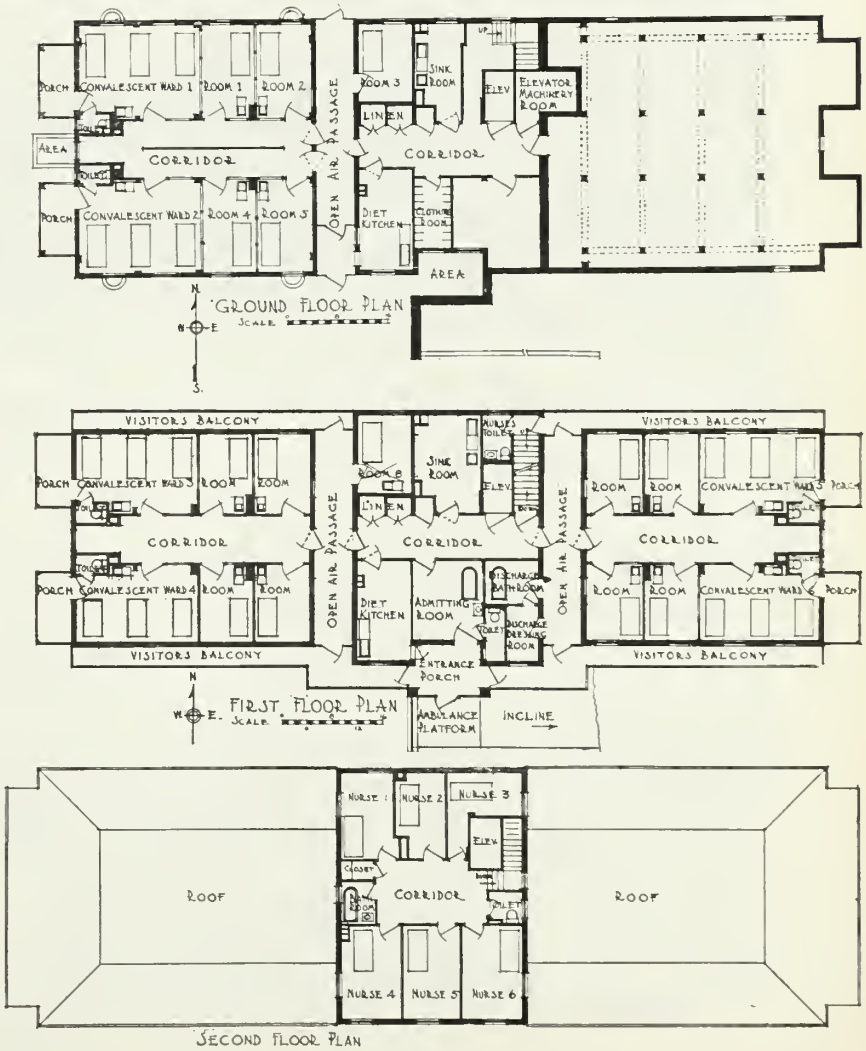
The nurses' dining room, sunny and airy, occupies one end of the building, and the staff dining

room is next. These two have their own entrance, and are served from one serving room, where there are dish cupboards and a dishwashing machine.

On the upper floor are two sets of rooms for men and women servants, each with bath and separate staircase. Provision is made for only a few, as in Jacksonville most of the servants are accustomed to go home at night.

The power house is designed to provide steam for heating, cooking, sterilizing, etc., for all present and future buildings. Space has been reserved for additional boilers when the final pavilions are added to the group. The machinery room has space for an electric generator if it becomes desirable for the hospital to put in its own plant.

The laundry is on the first floor of the power house building, its only entrance being across the bridge from the service building. Soiled and clean linen, and workers and visitors must go through the office, putting the whole situation into the control of the person who is there.



St. Luke's Hospital—Isolation building and floor plans.

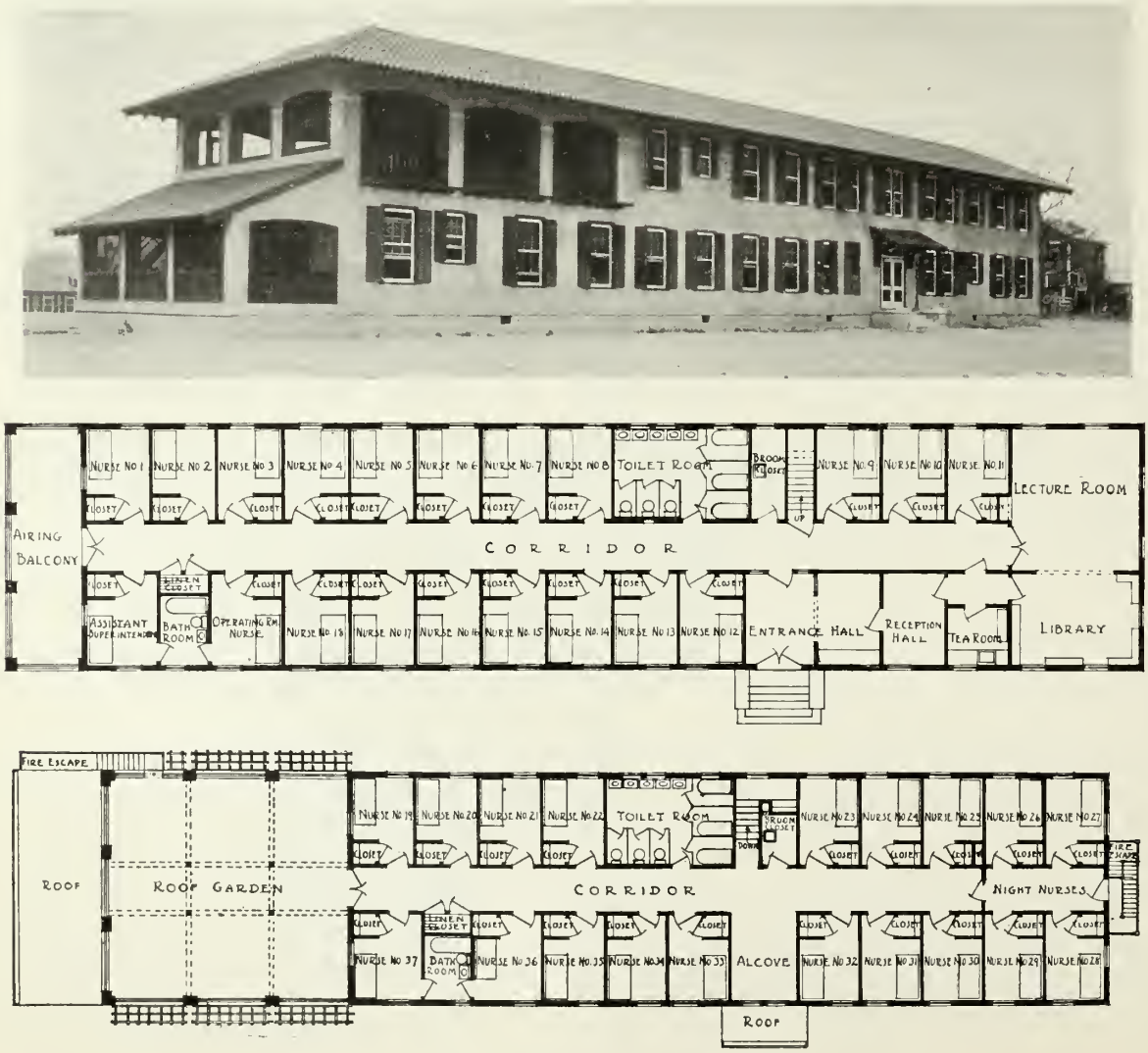
The laundry work is done in one large room, the washing being at the right and the ironing at the left. The machines are so arranged that the current of work is continuous and that there are no cross currents. The sorting boxes and delivery counter open into the office. The equipment consists of a wood cylinder washer, a sterilizing washer, an extractor, a two-truck dry room, a high-speed, five-roll flatwork ironer, a body ironer, and four eletcric hand irons.

At the northeast corner of the building is a separate entrance for the linen from the contagious pavilions. The sterilizing washer sets into the partition of this room, and has a door at the back which opens into it, so that all goods may be put directly into the washer by the one who brings them, and need not be handled by anyone in the laundry until after they have been boiled.

A large cylindrical sterilizer, with a door at each end, is set into another portion of the partition between the laundry and the infected linen room. Infected clothing, shoes, pillows, or mattresses are brought into the infected room and put into the sterilizer from that side, being afterward taken out on the laundry or clean side. The infected room has a sink, so that the person who brings things into it may scrub his hands before he leaves. The valves for steam, etc., are on the clean side of the partition. The apparatus is arranged for formaldehyde and ammonia, as well as steam.

The nurses' residence provides for forty nurses in single rooms. The rooms are purposely made small, being but 8x12 feet in size, so that they can never be used for more than one person. Each has a good-sized closet, a single bed, a large dresser, an easy chair, and a combination desk and bookcase fastened to the wall. There is a toilet and a bath tub to every six nurses, and a lavatory to every four. There are linen and broom closets, and a wash tray and electric iron for light laundry work. There is also a vacuum cleaning machine.

On each floor there is one suite of two bedrooms



St. Luke's Hospital—Nurses' home and floor plans.

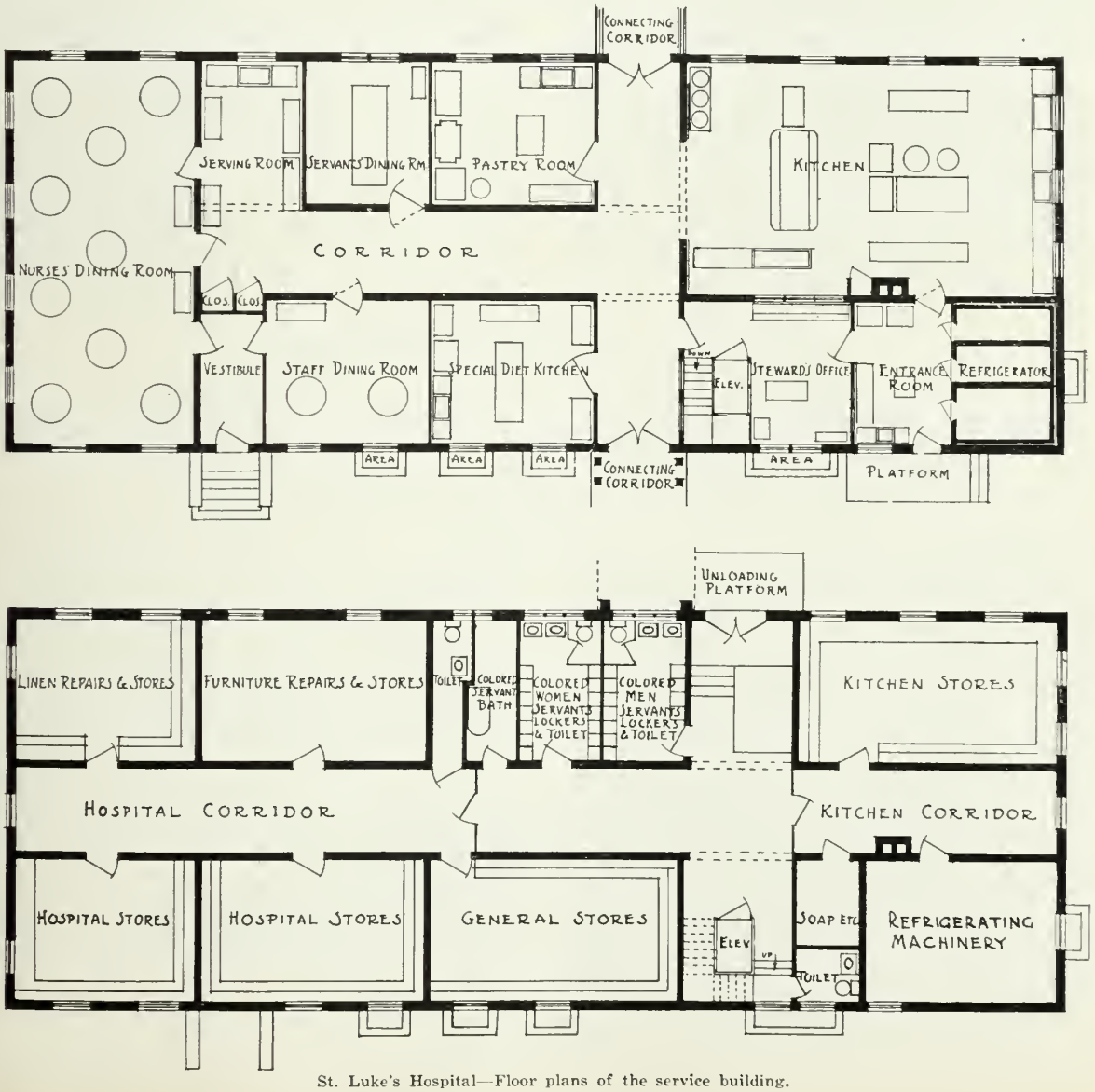
and a bath. These are for the supervising nurse, dietitian, night superintendent, etc.

There are two reception rooms, a tea room or kitchenette, with gas stove, sink, refrigerator, and cupboard; a lecture room furnished with chairs with a writing arm, blackboard, etc., and a library with built-in bookcases, reading table, and comfortable chairs. The floors of this part of the building are polished for dancing.

On the second floor is an alcove, which makes an extra sitting room or a sewing room. At the end of the second floor is a roof garden, under cover, the exact counterpart of the one at the private pavilion. It affords an ideal place for sleeping out or for daytime rest, and is furnished with cots, tea tables, and a swing.

The isolation pavilions are the most interesting features of the group. One is for white and one for colored patients. The plan is an adaptation of that of the Pasteur Institute of Paris, and avoids all the cumbersome and elaborate arrangements of the old school. All classes of contagious cases, with the exception of smallpox, are treated in one building, the acute cases being in single rooms and the convalescents in small wards. The rooms are cubicles, with glass partitions for ease of observation, each cubicle being complete in itself. Each case is treated as a separate entity. The success of the plan depends largely on correct technic, the so-called "aseptic nursing."

The Pasteur technic assumes that all persons and things which enter the patient's room are clean and all which go out are infected. It holds that there is no such thing as air-borne infection, and that practically all transmission of communicable disease is by contact with the patient, his secretions, or his utensils. The nurse wears a gown while handling the patient, leaving it inside the room. She also scrubs her hands before leaving the room. Utensils which have been used in the room must be deposited only in a sterilizer. Waste must go into the incinerator. Excreta



St. Luke's Hospital—Floor plans of the service building.

must be emptied without touching anything. All the details of the technic had therefore to be provided for in the building and its equipment.

The central portion of the building is the administration part, and is assumed to be clean. It contains the admitting and discharge rooms (which are disinfected after use), the serving kitchen and sink room, and the office of the nurse in charge. An open-air cut-off separates this from the part occupied by patients.

EQUIPMENT.

Each room or ward has a scrub-up lavatory or sink, with combination faucets controlled by elbow handles. Each sink has a drain board made in one piece with it, for solution basins, hand brushes, and other appliances. There are hooks provided for hanging two gowns. The soap dispensers work with a pedal. The door handles are levers, which may be manipulated with the elbow or upper arm.

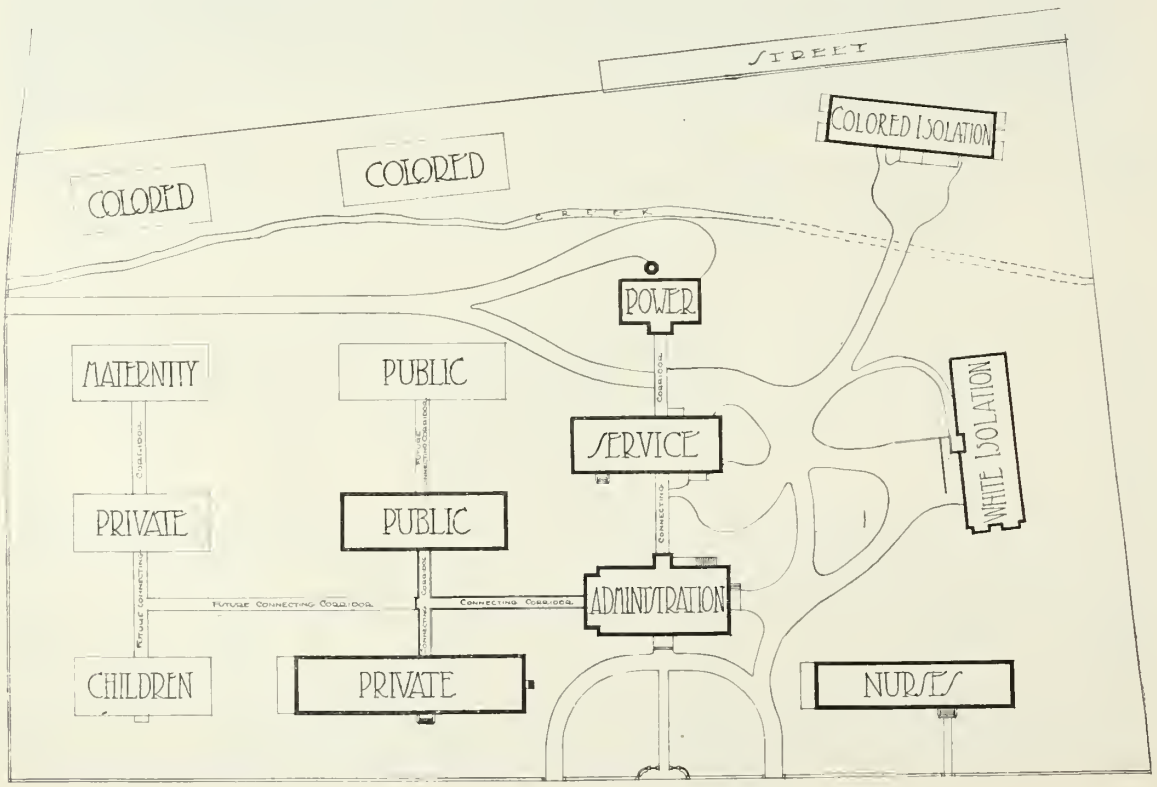
In the sink room the incinerator opens with an elbow handle and the utensil sterilizer with the foot, and the slop hopper faucets have elbow handles. In the serving kitchen the dish sterilizer opens with the foot, and is large enough to admit a tray and its dishes. This sterilizer is so arranged that the dishes which are to go back to the main kitchen may be removed from it by a person who stands on the porch outside.

By means of these carefully worked out details a nurse is enabled to care for a patient, dispose of all waste material, care for all utensils, accomplish the sterilization of all appliances, and finally cleanse her own hands, remove her gown, and be clean, to start on the same routine with a second patient, who may be ill with a disease of quite a different nature. The surprising part of it to people who have not tried it is that the number of cross infections is very small compared with those which occur under the old, elaborate methods.

ADMITTING.

When a patient is admitted he is undressed in the entrance room, his clothing sent to the laundry for sterilization or disinfection, and a bath given him. The tub is a deep slab of white porcelain, and the washing is done with a spray, so that the bath is practically a shower bath in bed or a shampoo in running water. Hospital clothing is then put on him and he is placed in a single room. When convalescent, he is placed in a 3-bed ward with other patients recovering from the same disease. The ward is treated as a unit, but the aseptic technic is maintained.

For bathing patients in their rooms, a portable tub is provided, similar in principle to the one in the admitting room, but made of wood covered with copper for lightness. It is set on a wheeled stretcher frame of the same height as the bed, so that the patient may be easily transferred to it, and bathed with a spray attached to the faucet at



St. Luke's Hospital—Plan of the group.

the scrub-up sink. A floor drain in each room receives the waste water from the tub. The tub is disinfected after each using.

DISCHARGE.

When the patient has recovered, he is taken through the open-air corridor to the discharge room, given a cleansing and disinfecting bath, and passed into the dressing room, where he receives his own uninfected clothing. From this room he departs without coming in contact with other persons or parts of the building.

FINISH AND DETAIL.

Hospital finish of the strictest sort has been carried out in these pavilions. Everything not absolutely necessary to the treatment is eliminated. The furniture of the room consists of a bed, a comfortable chair, and a table, besides the lavatory. The curtains are of fine brown linen, and there are no window shades. Washable rugs are provided for the rooms of convalescents.

The wards have toilets directly off them, and each has its own screened-in porch.

VISITORS' BALCONY.

Visitors are not allowed in the building, but there is a narrow balcony running in front of every room, so that parents and friends may come to the patient's window, see him, talk with him, and know how he is getting along. This provision is an important item, since it establishes the confidence of the public in the hospital. If they can see the patient and note his progress, get an idea of the working of the institution, and have opportunity to observe, they are satisfied. If they are refused a sight of the patient, they immediately become suspicious of all that pertains to his care.

NURSES' ROOMS.

Though there is considered to be no adequate reason why nurses caring for contagious cases should not mingle freely with other nurses, it was deemed advisable at the present time to house them in the isolation pavilion. The second floor, therefore, provides single rooms for six nurses, with bath, etc., these rooms being fully as commodious as those at the nurses' residence. There is a separate entrance through one of the open-air corridors.

PROVISION FOR EXPANSION.

The pavilion provided for white persons has accommodation for 20 patients on the first floor and 11 on the ground floor. The first floor only is in use, the ground floor being finished, but left without equipment until it is needed.

The pavilion for colored persons has room for 11 patients. It is an exact counterpart of the administration and one wing of the white pavilion, the only difference being that this is not a fireproof building. Another wing can be added at any time, doubling the capacity, without the necessity of adding to the administration or utilities.

FEEDING THE HOSPITAL—THE FOOD.[1]

Discussion of Principles—Sources of Food—Function in the Body—Composition and Utilization—Milk and Its Products—Butter, Its Uses and Its Substitutes.

By MISS LULU GRAVES, Dietitian Lakeside Hospital, Cleveland.

PAPER II.

NOT only does our food play a very important part in our physical and mental efficiency, but it also furnishes one of the largest items in our expense account. Logically, this would make it one of the first considerations in our business of living. As a matter of fact, it is all too frequently one of the last, if it is given any consideration at all.

Nature has provided wisely for the human body, not only in supplying foods adapted to its various needs, but in providing facilities for utilizing the food. The extent to which we use or abuse this provision of nature has much to do with the lasting qualities of our physical mechanism.

Among those of us who are well and strong, and wish to remain so, as well as among those who are handicapped by physical weakness, there is being shown a more wide-spread interest than formerly in both the quality and quantity of food eaten. No doubt this is partially due to the emphasis many of our leading medical men are placing on the dietetic treatment of disease. For the reason that it is only in recent years that this has been given much attention, there are comparatively few really proven facts or well-established theories on its several phases, and we find almost as many opinions as we find advocates of scientific dietaries. But on one phase all are agreed—that more attention should be given to the nourishment and care of our bodies, keeping them fit all of the time, rather than relying on drugs or other means of furnishing temporary stimulation.

So much is being written on the subject of food,

[1]This is the second of a series of eight papers on "Feeding the Hospital." Last month, "Introduction;" next month, "Tea, Coffee, Cocoa, and other Beverages."

food materials, and diets that one need have no difficulty in acquiring information. The bulletins issued by the United States Government at Washington, by the state experiment stations, and by the agricultural colleges are authentic, and may usually be obtained for the asking. The terminology may, however, be confusing to one not familiar with the usage of the different publications, as it is not uniform. The terms most frequently in use are food, food material, and food constituents.

A generally accepted definition of food is anything which, when taken into the body, is capable of building or repairing tissue, or of furnishing material from which heat and energy may be produced. Food material—or, as it is sometimes called, foodstuff—is that from which food may be made; a food principle or food constituent is the nutritive element in foodstuff. For example, bread is a food; flour is one of the food materials used in bread making; starch, a form of carbohydrate, and gluten, a form of protein, are food principles contained in flour.

All foods contain carbon, hydrogen, and oxygen; proteins contain, in addition to these, nitrogen, this being their distinction from other food principles. Thus we have the classification nitrogenous and nonnitrogenous foods; the nonnitrogenous includes the carbohydrates and fats.

Carbohydrates are the sugars and starches, and, as the name implies, are made up of carbon and water, the hydrogen and oxygen being in the same proportion as water—2 atoms of hydrogen to one of oxygen (H_2O). Carbohydrate, with the exception of lactose and glycogen, is obtained chiefly from vegetables and fruits. Starch, the most complex form, is found in all green plants, and is manufactured by chlorophyl and sunlight from the carbon dioxid in the air and water in the soil. The starch grain is inclosed in a cell wall (cellulose), often hard, as in rice and other cereals. When in this form it should be cooked long enough and at high enough temperature to soften the intercellular tissue and reach the starch grain inclosed, making it soluble and more easily digested. Starch is not soluble in cold water, but is made soluble by the application of heat, either dry or moist. The action of dry heat on starch produces dextrin. Familiar examples of this are found in toasting of bread, browning flour for gravies, etc. Many of our cereals are practically dextrinized, and on this ground the manufacturers claim for them that they are more easily digested than others.

But the body cannot use the starch even in this soluble form; it must be changed to dextrose before being available—in fact, all forms of carbohydrate must be changed to some form of dextrose before being absorbed by the body. There are many intermediate steps to this process, which begins in the mouth, with the action of the ptyalin producing the first change, and is ended in the intestines, where it is reduced to its simplest form. Dextrose is found in a natural form in fruit and plant juices, honey, raisins, and sweet corn in comparatively large amounts, and in small amounts in many other vegetables. It is one-half as sweet as sucrose, or cane sugar, and is known technically as invert sugar. It may also be produced by the action of acid on cane sugar. In the body this is done by some of the digestive juices; in cooking a familiar illustration is given in the addition of lemon juice or cream of tartar to cane sugar when making icing, fondants, etc., to prevent crystallization.

While dextrose is more easily digested and more quickly assimilated, it ferments readily and surfeits quickly. When absorbed by the body, the final products of carbohydrate furnish heat and energy, the waste being eliminated in the form of carbon dioxid and water through the breath, perspiration, and urine. Cellulose is not, strictly speaking a carbohydrate, yet it is found so abundantly in the fibers, skin, etc., of vegetables and fruits that it may be mentioned here. It has practically no nutritive value, but is an important aid to digestion, as it furnishes the necessary "bulk" for stimulating the motions of the digestive tract, and prevents constipation.

Fat is also a carbonaceous food, but the carbon, hydrogen, and oxygen are in a different proportion from that of carbohydrate. Fat has more carbon and hydrogen and less oxygen, and therefore oxidation must take place in the body. Oxidation is a heat-producing process, so that fat gives off more heat during digestion than carbohydrate—approximately two and one-quarter times as much—but it is stated by some of our physicians that the fuel heat of the carbohydrate is necessary for the burning up of the fat. These two may be substituted and interchanged in the body as they are in diabetes, but it is not wise to do so under normal conditions.

Fat particles may coat the food and prevent the action of the digestive juices upon it, or they may coat the lining of the digestive tract and prevent the ready flow of the secretions. Fat is digested in the intestines, and the completeness with which it is absorbed is in proportion to the temperature at which it separates into fatty acids and glycerine—i. e., the "cracking point." The higher this temperature, the greater the percentage of absorption. Olive oil has a high cracking point; butter, a low. From the standpoint of digestion,

olive oil is a much more desirable form of fat for cooking purposes than butter, but its expense bars it from common use. There are, however, on the market many forms of fat that answer the purpose equally well, especially for deep fat frying and sauteing, the food value and digestibility being much the same, the chief difference being in the flavor. These are vegetable oils, and cottonseed oil is the principal ingredient in all of them. When not heated to the temperature at which this change takes place, butter is a most easily digested form of fat.

Lack of proper amount of fat in the diet leads to constipation, and may retard the function of the liver. As it has been stated by one man, "the phagocytes of the blood need fat as ammunition for killing germs," and people who eat a sufficient amount of fat need never fear tuberculosis. That is why codliver oil and olive oil are often prescribed for consumptives.

As mentioned above, the nitrogenous foods are those which contain nitrogen in addition to the other elements, and include porteins and albuminoids. The common sources of animal protein are milk, eggs, and meat; of vegetable protein, legumes and cereals. Animal protein foods are concentrated and quite thoroughly digested. Meat has an agreeable flavor; milk and eggs have a mild flavor, which makes it not only possible to use them for a long time without palling on the appetite, but they may be successfully combined with other food materials. These foods contain mineral salts, which are valuable in addition to the protein. On the other hand, vegetable foods from which we get protein are bulky, as before mentioned; this bulk is desirable for the process of digestion; they give variety to the diet and are a much less expensive form of protein food material. It is in these legumes and cereals that we find the substance called vitamines, which have the power to stimulate metabolism and seem to be necessary for growth, though their composition is not yet known. Purins are present in these forms of vegetable food, and they, too, play an important part in metabolism.

It is not our purpose, however, to discuss the numerous proteins found in food materials, their chemical dissimilarities, nor their function in the body, except in a general way and in connection with the food in which they are found.

In cooking, proteins are coagulated by heat and toughened by a high temperature. For this reason meat, eggs, and milk should be cooked at a temperature below boiling point. Then, too, experiments have shown that some of the vitamines are destroyed at a temperature of 60°–70° C. and nearly all at a temperature of 110°–120° C.

Proteins are acted upon by pepsin (casein in milk by rennin) in the gastric juice, being changed to peptones and proteose. The pancreatic and intestinal juices change most of them still further, and they are absorbed by the body in the form of animo acids. Their function is to build tissue chiefly, though they furnish some heat and energy; the waste is eliminated in the form of urea.

The carbohydrates, fats, and proteins are the food principles obtained from organic food materials—those that must be oxidized and chemically changed before being utilized by the body. We have present in our foods other food principles known as inorganic, which are taken into the body in a highly oxidized form and are assimilated without further change. These are mineral salts and water. They do not liberate heat, nor do they build tissue, but they are essential for maintaining body development.

The mineral salts found in the ordinary diet are sufficient for ordinary use. If any are lacking, it is most apt to be iron and calcium; in a vegetable diet sodium chlorid (common salt) may be lacking, as vegetables contain little salt in soluble form as compared with animal food. The majority of our vegetables contain large amounts of potassium salts, which in the blood react with the sodium chlorid, forming sodium sulphate and potassium chlorid ($KSO_4 + NaCl_2NaSO_4 + KCl_2$). As these are both removed by the kidneys, there is a natural craving for more in the food. Often sodium chlorid is added for flavor only. Sodium and potassium help in the construction of blood cells and muscles, sodium chlorid dissolves the globulin in the blood and controls the flow of water to and from the tissues by osmosis. Calcium helps the growth of bone and teeth. Milk, eggs, and cereals are rich in calcium; this is one reason why they are good foods for children. Spinach and asparagus have a high percentage of calcium.

Ferrous salts (iron) are necessary for the production of hemoglobin. The amount of ferrous salts present in vegetables depends on the soil in which they are grown; the amount in animal food depends on the bleeding of the animal when killed. Green vegetables, especially spinach, are rich in iron; cereals, beef, and egg yolk are other sources. No food, however, is rich enough in iron to make good by dietetic means any marked deficiency in the blood.

Phosphorus and magnesium are other salts found in the body in large enough quantities to be mentioned. Phosphorus is furnished in the yolk of egg and in wheat. Under normal conditions the requirements of the body for mineral salts will be met by the use of a mixed diet. Wa-

ter usually contains a comparatively large percentage of salts, the mineral salts present being indicated by the hardness of the water. If these salts be in the form of carbonates, they may be precipitated by boiling and the water made soft; but if they be in the form of sulphates, it is very difficult to soften the water.

Other uses of water in the body may be to act as a cleanser inside as well as outside. If taken when the digestive tract is free from food, waste tissue, particles of food, etc., may be washed out. This is why drinking water before breakfast may be found beneficial in constipation, as it removes any accumulation of matter that might hinder the flow of the digestive juices, providing the water be taken long enough before food is eaten to allow the flushing out process to be completed before being interfered with by the solid matter.

Water maintains the fluidity of the body, and in doing so helps to regulate the temperature. So many of the processes of metabolism, as well as catabolism, are due to hydrolysis, or dehydration, that water is necessary in keeping the body well nourished, though it contains no nutritive constituents.

The average person requires from 5 to 6 pints of water daily, depending on the habits and the temperature of the atmosphere surrounding him, though not all of this is furnished by actually drinking it. Some is in combination with other food and some is produced from combustion. The food value of any material depends not alone on the percentage of food principles which it contains, important as they may be; the amount of potential energy it yields, its digestibility, and its absorbability are all determining factors. A food may yield excellent results in calories of heat and energy, and yet be of little service to the body because it is difficult of digestion. Not the food we *eat*, but the food we *assimilate*, nourishes us. The portion of food assimilated by the body may differ greatly under different conditions. The body may be able to utilize more at one time than at another; the freshness of the food, its appearance, the manner in which it is cooked all have their effect. When we come to speak of some of the food materials a little more specifically, milk is the one uppermost in our mind, as it comes most nearly being the one used first, last, and all of the time.

While milk is an essential food, it is not, as is sometimes stated, a perfect food. It is true that the young animal, both child and lower animal, is able to live on an exclusive milk diet, and its needs are quite fully met by this diet. The needs of the young, however, are not the same as those of an adult. The requirements of the young are more for the growth of tissue and bone than for the storing of fat or producing of energy. Milk contains enough protein and mineral salts to meet these requirements, but lacks sufficient carbohydrate to produce the heat and energy required by the adult.

One quart of milk contains about the same amount of nutriment as 12 ounces of beef or 6 ounces of bread. Though these contain approximately equivalent amounts of nutriment, the nutritive value is not the same for an adult, as there is a higher percentage of material which may be assimilated in the bread than in the milk. It is a better "balanced" food.

Milk contains all of the food principles—carbohydrates in the form of lactose, fat in the form of cream, protein in the form of casein and albumin, mineral salts, and water. It is easily and completely absorbed, but, as there is no bulk remaining, a prolonged use of milk may lead to constipation or dyspepsia. Because it is deficient in iron, one using milk constantly may become anemic. Bread and milk make a very good food, as bread supplies the lacking constituents.

The composition of milk varies with the different breeds of cows and in different cows of the same breed. Jerseys and Alderneys produce rich, yellow milk, the cream rises rapidly and very completely, almost all separates from the milk, leaving it thin and blue-looking; in the milk from Holsteins and Durhams the cream rises slowly and not at all completely, leaving a richer milk. Cream contains all the food principles, though in very small amounts, except fat. The particles of fat in cream are very finely divided, making it easy of digestion. Cream does not produce as much energy as butter, and it is a proportionately more expensive food. The use of cream as an accessory to so many of our present-day dishes is due to a habit, or a cultivated taste for rich things, rather than to a logical combination of materials.

Skimmed milk contains the nitrogenous food principles, mineral salts, and sugar, lacking the fat in proportion to the method of separating. The value of skimmed milk is not generally appreciated. It may well be used in cooking where fat is not needed or is furnished in some other form. The souring of milk does not affect its food value; one step of digestion has been taken in the splitting up of the lactose into dextrose and galactose. Sour milk is produced by lactic acid-forming bacteria; when this acid is formed, the casein, which is insoluble in an acid medium, is precipitated. This continues until such a percentage of acid is formed that the bacillus acidi lactici will no longer act—in other words, when

this degree of acidity is reached, the milk will not become any more sour. Other organisms may be present and produce other changes, though the acid medium has a tendency to check the growth of other microorganisms. When casein is precipitated by acid in the form of a curd, the change is a physical one, and the properties are the same as they were in the sweet milk. If an alkali be added, the curd will be redissolved. Sodium bicarbonate (common baking soda) is most often used for this in cooking. But if the casein is precipitated by rennin, a chemical change takes place, and the properties are not the same; caseinogen is formed and it cannot be redissolved by an alkali. Rennin is the milk-coagulating enzyme of the stomach. Rennin taken from the stomach of a calf furnishes the commercial rennet or junket tablets on the market. When rennin acts upon the casein, a clot is formed, which shrinks and squeezes out the whey, and forms a mass the density of which depends on the amount of casein and mineral salts present and the acidity of the gastric juice. The normal, healthy digestive apparatus is equal to the task of handling this mass, but there are some that have difficulty with it. This difficulty may be overcome by adding to the milk lime water, barley water, or even plain water to dilute the milk and lower the percentage of casein. Cracker or bread crumbs will separate the particles of casein and lessen the formation of the clot. Sipping the milk slowly will help, too. Souring of milk is a natural occurrence, and will always take place within a few days after being drawn from the cow, the length of time depending on the cleanliness of the milk and the temperature at which it is kept. Preventing this action by means of preservatives is no longer prevalent to any great extent, nor is the adulteration of milk with water, since so much has been done by individuals and communities to improve the quality of milk sold.

If formalin is added to the milk to preserve it, there may not be, as has been claimed, enough present to do any great harm to the person drinking the milk, but we infer that a dealer who must resort to this means is producing milk that is not clean or is contaminated in some respect. The formalin destroys the lactic acid-forming bacteria, but does not inhibit the action of some others. If these are in the milk, they have a clear field in which to develop, as no acid medium will be formed for some time, and may produce a very harmful product. Milk is a most excellent medium for the growth of microorganisms, as it furnishes the required food and moisture, proper temperature being the other requirement for their activity. For this reason milk should always be kept at a low temperature; it should not be exposed in a room, particularly if there are many people moving about in the room, as is likely to be the case in kitchens of institutions; nor should it be left uncovered where other food materials are being kept. Milk will keep longer without souring if it is pasteurized. Pasteurization of milk is submitting it to a temperature of 140° to 160° F. for a period of about twenty minutes, the temperature used varying with different dairies. This destroys many of the bacteria, including the lactic acid-forming, but not all. When we are in doubt or ignorant of the source of our milk supply and the methods used in handling it, pasteurizing may not give us the product for which we wish, but it at least is safer than the same milk would be in a raw state and somewhat more satisfactory. If, however, it is not properly cared for after pasteurization, it may be worse than if left raw, as the later growth of disease-producing microorganisms has not been checked.

Sterilization, submitting milk to a temperature of 212° F., kills practically all bacteria, and milk keeps longer, provided there is no further contamination. This high temperature destroys the emulsion of fat, part of the calcium salts are made insoluble, so that the action of the rennet is interfered with, the taste is altered, and the casein less easily digested. Milk is being produced by some dairymen which they certify has been produced under the best possible conditions. This means that the cows are healthy and clean, the barns sanitary, the milkers and all utensils coming in contact with the milk kept free from contamination. Some of our certified milk farms are models of cleanliness and care, and the milk contains comparatively few bacteria, but the milk is higher priced, and for this reason is not used except in special cases, or by the well-to-do. For infants, or others with very weak digestion, milk may be peptonized. Peptone tablets are made from an extract of pancreas containing pancreatic ferment, which acts upon the casein of the milk, making it soluble. This may be done by either the cold or warm process, but for mouth feeding should not be allowed to continue long enough to become bitter. When the proper degree of peptonizing has been reached, the milk should be put on ice to prevent any further action.

"Eiweiss milch" is found to be very beneficial for children who are anemic or have intestinal disturbances. This is obtained by precipitating the curd from milk by heating to a temperature of about 100° F. and adding chymogen powder in the proportion of 2 tablespoonfuls to a quart of water. Allow it to stand fifteen or twenty minutes, or use less chymogen and allow it to stand

longer, keeping the temperature at about 100° F. until the casein is coagulated. Then drain for about an hour in a sterile muslin bag. To the curd of 1 quart of milk add 1 pint of buttermilk. Press through a fine sieve two or three times, beat vigorously. As it is hard to get the curd fine enough to stay in suspension, care must be taken in warming the milk for use. This gives a milk rich in protein and fat, but poor in sugar.

Koumiss is another preparation from milk that is valuable in fevers or generally impaired digestion. The original koumiss was made from mare's milk, using the milk from mares that ran wild on the steppes of Russia. In this country cow's milk is used, and fermentation is by kephir grains; both lactic acid and vinous fermentation take place and the product is readily digested. It is expensive, but it has a large amount of nutritive constituent rendered easy of absorption.

Lactose—milk sugar—the carbohydrate of milk, is a particularly good food for infants and invalids because it is easily digested, though the exact physiological effect is not clearly understood. It is not so sweet as cane sugar and consequently does not pall on the appetite so quickly. It is readily acted upon by microorganisms, splitting up into lactic acids. This action in the intestines may produce diarrhea or infantile summer troubles. Lactose is used in the making of homeopathic pills.

The chief products of milk are cheese and butter. Cheese consists essentially of the casein and fat of milk, though the coagulated curd entangles in its meshes small portions of albumen, lactose, and mineral salts. The nature of the cheese depends on the richness of the milk, kind of milk, and amount of pressure used in manufacturing. If pure whole milk is used and clotted with rennet, almost all the food value of the milk is transferred to the cheese. This is the case in making Cheddar cheese; or, as in the making of Stilton, the proportion of fat is made greater by adding cream; or, in other cases, the cream is removed and a low percent of fat is left. This is sometimes done in making cottage cheese. The flavor depends on the species of bacteria used during the ripening process; each species produces chemical changes which give characteristic flavors. The ripening process continues for weeks, and in some cases for months, the flavor slowly growing stronger all of the time. The soft cheeses, Camembert, Stilton, cream, Neufchatel, etc., should be consumed soon after manufacture. Neufchatel and cream are similar to cottage cheese, and may be eaten after one day of ripening. Cream cheese has more fat than the other two, but none of them is subject to the curing process. Camembert is a French cheese. An experienced French cheesemaker was secured at the Storr's experiment station in Connecticut, and it is said the cheese being made there is very much the same as the French product in quality and appearance, and is made more scientifically and under more rigid control. This cheese ripens in about thirty days, is kept in a cool place, and a mold develops during curing, which changes the color to a grayish green and makes the cheese soft and creamy.

Edam is the most famous of the Holland cheeses. It is made from a pure culture of slimy bacteria. In Holland it is marketed in about a month, but when we get it in this country it may be several months old. Roquefort is made from goat's milk and ripened by a green mold, has a strongly marked flavor, and is very expensive. Parmesan and its variations, Gruyere and Gorgonzola, are also made from goat's milk. These are the so-called fancy cheeses, and the high price is paid for flavor rather than food value. This is true of many of our foods, but is far more likely to be the case in buying cheese. American cheese contains more nutriment than Parmesan and is half the price. Stilton is about the same food value as American, but twice as expensive. Cheese eaten for flavor is an expensive food, but, if eaten for food value and proper varieties bought, it is a decidedly inexpensive form of protein, and well-ripened cheese is not hard to digest for the average healthy, normal digestion. Because of the large amount of fat, it may cause trouble for delicate digestive organs, unless it is very finely divided. This may be done by grating, by thoroughly chewing, or by mixing with milk and eggs. Another reason for disagreeable effects in the stomach is that fatty acids are formed in small amounts during the process of ripening, and these may prove irritating. The nutritive value of cheese is very high, and it is helpful in digestion; it has an action similar to that of an enzyme. This is why it is used at the end of a heavy meal, and gives rise to this familiar quotation, "Cheese, thou mighty elf, digesting all things but thyself." It is said that "Americans taste cheese, Europeans eat it."

[This paper to be continued in the November issue.]

Early in the summer the people of Rome, Ga., planned a home-coming holiday week to welcome a visit from Mrs. Wilson, wife of the president, to the home of her girlhood. Now that the original purpose of the holidays has been rendered impossible of being carried out, it is proposed to devote the occasion to the raising of funds for the erection of a new city hospital as a monument to Mrs. Wilson and to be named in her honor. The hospital project was launched some time ago and seemed assured of success, but it is thought that the injection of the idea of making the hospital a monument to Mrs. Wilson will give the movement a new impetus, and make it possible to establish an institution that will meet the needs of the city for a longer period.

HOSPITAL COST ACCOUNTING.[1]

Vast Difference Between Hospital Needs and Necessities of Commercial Organizations—Simplicity Coupled With Exact Knowledge the Keynote—Some Forms of Organization That Lend Themselves to Proper Bookkeeping.

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THE task of preparing a paper which shall do justice to so serious a topic as hospital cost accounting, and in a way which will make it at once instructive and interesting to a convention, is an extremely difficult one, for, in spite of its fundamental importance and indispensable character, the subject is as dry as the proverbial "bone" to the minds of most persons who have not been brought by circumstance or chance into close relationship with the processes of the accounting department of a commercial business or of an active institution.

The intelligent and progressive hospital superintendent, charged with the responsibility of maintaining an institution at the point of highest efficiency and lowest commensurate cost, attends a gathering of this nature not alone for the purpose of hearing the views and experiences of men from the "other side of the hills," that he may profit and add to his store of knowledge, but for diversion and recreation, glad enough to leave behind the routine of office duties and the contemplation of comparative figures concerning the costs of maintenance. He desires to forget for a season that he ever heard of brain-fagging and exasperating statistics which show the hospital to be not self-supporting, and which call constantly for an increased revenue and greater economies in operation.

To attempt analytic or technical treatment of the subject would mean failure for the paper as a convention attraction, while too general handling would deprive the discussion of its value in supplying food for thought and material for direct application to refinement of system. It is this possibility of failure to meet the varied requirements and demands of convention delegates that militates against a technical presentment, which might be of real value to those who read and follow up the reports as printed in the year book of the association.

It follows, therefore, that the successful solution of the question as to the way to please and interest lies in respectfully dragging this "accounting mummy" from its ancient wrappings and diplomatically adorning it in modern commonsense clothing, wherein at least its appearance may attract attention and favorable comment. Its habiliment should reflect a happy medium between the "hobble skirt" of elaborate and congested operating formulas, which hamper free action and stultify efficiency, and the "hoop skirt" of easy-going indifference to those accepted standards which insure adequate and economic control.

From the writer's outlook, based on twenty years of actual, active participation in hospital management, and a similar period of professional experience in institutional accounting, the establishment of a hospital in any community should be on business principles and its conduct on business lines, with one object constantly in view for all of its accounting and statistical processes—namely, that of simplicity. The use of this word does not imply a condition of crudity or incompleteness in system, but rather a freedom from those elaborate plans for distribution of operating expenses to departments and activities which, while quite essential in a manufacturing business, are costly and of no practical value to the management of a hospital; simplicity in the form of records and reports; simplicity in the daily workout and application of accruing data; and simplicity in methods of collating and segregating results.

Unfortunately for the best interests of the hospital community, there has been for some time past a tendency to inject into the otherwise simple problem of hospital cost accounting a serum of so-called "modern efficiency," supposed to be an antidote for existing ills, but in reality a propaganda of impractical theories, good-looking enough on paper, but in real use a source of expense without resulting benefit.

A hospital has no more need for a diffuse distribution of its costs on a railroad or manufacturing basis than has a typhoid patient for broiled lobster, the difference being that, while the system is slow torture, the lobster is sudden death. They both destroy in the end.

Perhaps you are not familiar with the case of the hospital which employed a "system expert." One year after the installation of the plan the superintendent met the expert on the street, and in reply to his question, "How's the system working?" replied, "It's working perfectly; shows results each day, just as you promised." "Is the hospital busy?" queried the expert. "Oh," replied the superintendent, "we closed the doors three months ago in order to keep up the system."

The business of the hospital is not a competitive one, and hence the refinement of its cost system

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

beyond the point of complete operating control and for compulsory statistics is quite unnecessary. Your hospital must meet the requirements of the community it serves through the medium of the best equipment and the highest grade of surgical, medical, and nursing service known to modern science, and it must acquire this equipment and secure this service, no matter what it costs for installation and operation, or go out of business.

Food supplies must be purchased, and the diets prescribed by physicians for patients must be furnished without more regard to the cost than to buy at the lowest prices demanded for commodities of standard grade. Medical and surgical supplies of absolute purity and guaranteed quality must be purchased and dispensed alike to pay patients paying high prices for private treatment and to free patients calling at the dispensary.

Thoroughly modern equipment must be provided for the operating room, the pathological laboratory, the dispensary, the private rooms, and the wards. The sterilizing, cooking, lighting, heating, and laundry apparatus must be complete and of the best makes, and the ambulance vehicles must be of the automobile type to secure promptness in reaching the point of call from the sick or injured.

The operating staff, from the superintendent down, must be experienced and efficient, and the salaries paid for such efficiency are not lower proportionately than in mercantile establishments. Board and lodging must be supplied for practically the entire staff, and the plant must be kept going each day in all departments, during all seasons and through dull as well as busy periods, in order that it may be in readiness for emergencies which are likely to occur at any hour of the day or night.

Your staff of nurses, interns, and household help cannot be reduced or discharged to suit the conditions of health in the community, nor can your overhead costs for repairs, supervision, and record keeping be molded to meet the conditions of periods of activity or dullness; and last, but not least, in the state of New York, in common with other states where governmental supervision is strict and exacting, all these various functions and activities must be kept at the highest point of efficiency, or your institution falls below the first-class rating accorded only to the fully equipped and well-maintained hospital.

The contention has been made that good business management of the hospital can make it entirely or more nearly self-supporting through revenues derived from its own internal activities by charging to persons treated the cost of such treatment in supplies and service.

This claim can be substantiated in communities where cases of poverty and want are infrequent or unknown, and where patrons of the hospital can afford to pay for the help received. The condition may also be attained where the rentals from private rooms and wards and the fees charged for special service are sufficiently in excess of the actual cost to pay the losses accruing from the care of free patients, but in crowded sections, where there exist a large number of poor and needy persons who must be cared for with little or no return, it becomes a physical impossibility to operate the hospital without a deficit in operating income.

In a commercial enterprise exact costs are necessary in order that articles produced may not be offered for sale at prices below cost, and, when the cost is found to exceed the obtainable market price, the production can be abandoned as unprofitable. In order to determine the full cost of production of any article, certain well defined rules must be followed to ascertain the quantity and cost of materials used, the labor expended in processing these materials, and the share of overhead and executive expenses applicable thereto. The careful following of these costs, changing them to meet altered conditions, dropping out old and introducing new factors as they appear, and always keeping up to date, is quite essential to profit making, and where losses occur the executive uses the comparative cost data to locate the source of the loss.

This process is of the utmost value where its use is the basis of continuance or cessation in production, but it is of very little value where the business in hand must continue in spite of proven and continuous deficits. Such is the case in the business of an institution for ministering to the needs of the sick and suffering, and where, instead of closing the doors, the management must find means for raising the revenue to carry on the work.

The business of a public hospital should never be commercialized to the extent of eliminating the feeling and atmosphere of charity pervading the use of its dispensary and wards. Its service to the community at large and its grip on the sympathies of charitably inclined persons are generally the measures of its success, and the setting aside of the features of charity and sympathy as of secondary importance eliminates public interest and makes the process of accumulating an endowment fund very tedious, if not impossible. The hospital is in a bad position when the public believes it to be no longer in need of help.

For purposes of comparison and control, it is very necessary, for instance, to follow the cost of drugs and medicines purchased from month to

month, and in a large institution, where a stores department is possible, the consumption of these articles each month as dispensed to the departments, but it is expensive and unproductive in any institution to attempt to follow exactly the monthly cost of drugs and medicines consumed as between the pathological department, the outpatient department, the operating rooms, the private patients, and the various free wards.

For the same reasons the cost of food stuffs must be followed on a purchase or consumption basis from month to month, but only in the very largest institutions, such as the German hospitals of 1,000 to 2,000 beds, does it become of any benefit to distribute this cost between the hospital staff, the nursing staff, the household staff, the pay patients, the free patients, and the general help.

Where the hospital is equipped with separate kitchens for the private patients and for the ward patients and staff, the matter of following the food costs is somewhat simplified, but even under such conditions the degree of accuracy required implies a mass of detail costly to accumulate, and still more costly to reduce to concrete comparative form, following a plan of analysis for the guidance of the executive.

It may be interesting to know the actual cost of sterilizing, washing, and ironing the garments and flat pieces passing through the hospital laundry from day to day as between the various departments, but experience will show that the clerical expense of following this cost is entirely disproportionate to the value of results. You may obtain the costs of the laundry by metering the consumption of water and of electric power, and you may aggregate the wages of the foreman and help, the cost of soap and chemicals used, the cost of repairs to buildings and equipment, and the overhead charges applicable to this department. You may distribute these costs to the departments in proportion to the number of pieces processed for each department, but the knowledge thus obtained is dearly paid for in the salaries of clerks, and the only good purpose served lies in disclosures as to loss of stock through carelessness or defective handling of machinery.

The distribution of steam and electric power from a central plant for purposes of heating, lighting, cooking, and sterilizing may all be measured or estimated at the point of intake in the various departments, and the cost divided on the basis of units of horse power and kilowatt hours, but the expense of installation of the measuring apparatus and its maintenance, to say nothing of the defective reports obtained, render the process both costly and unsatisfactory.

The process of cost finding in a hospital organization should be carried only to the point of providing the executive with comparative data which will assist him in controlling the operations of departments, but no farther. Figured costs, which can at best serve only as evidence of what has been done during any period, should never be regarded as a substitute for that physical attention to orderly and labor-saving performance which makes it possible to check waste and extravagance.

No system of cost finding will prevent the wholesale waste of food stuffs which will take place in every institution kitchen where supervision by the steward or housekeeper is lax or ineffective. The comparative cost figures may show an abnormal increase in the total cost of foods or in the per diem per capita cost, but effective economies in operation are neither dependent on or the result of a cost system, but rather the natural outcome of the exercise of that property of common "horse sense" in administration which looks after the leaks and compels observance of the rules of discipline and thrift. The cost system can be made an effective guide, but is in no sense a stop-loss insurance.

To make the accounting records of the hospital a true reflection of the daily operations, and to parallel the statistics of patients treated with the costs of such treatment, the costs should be compiled on a consumption, instead of a cash, basis. This method implies the maintenance of a stores department, to which all supplies shall be charged and from which all supplies consumed in the departments shall be dispensed on requisition to such departments, the costs of such deliveries being aggregated and charged each month in connection with direct charges for salaries, wages, and expense. The consumption of coal at cost would be an added factor, as would be the proper prorates for such fixed charges as taxes, insurance, interest, and depreciation on buildings, equipment, and machinery.

Many hospitals, and practically all those receiving moneys from municipalities for treatment of public patients, are compelled to report their accounts at regular intervals to city or state authorities on a straight cash basis, thereby making it obligatory to conduct the hospital records also on a cash basis, although such conduct does not lead to a true presentation of costs when set up for comparison beside the statistics of the number of patients' days of treatment during any fixed period. The per diem per capita costs, when figured on the cash receipt and expenditure basis, are not the true costs for the period covered by the vital statistics.

How long it may be before our city and state authorities will recognize these facts, and amend their requirements, is problematical, but, so long as the hospitals must meet these requirements, their books must coincide therewith in form and principle, the expense of maintaining two plans of administration being too expensive and voluminous to be considered. It is, therefore, advisable and practically necessary that all hospitals should continue to keep their books on a cash basis in order that statistical reports, condensing the operations of all such institutions, should not be compiled on false premises.

As the ultimate purpose of cost finding in a hospital organization is to determine the per capita per diem cost of treating private patients, ward patients, and dispensary patients, and as all preliminary and successive steps in the process of allocating costs are purely contributory to this end, it follows that the scheme of distribution should provide for segregating to these main objects all direct charges for materials, salaries, and expense, and for prorating to them their proportion of all general overhead charges which are not classifiable at the time of occurrence.

Such a scheme includes, of course, the general classifications necessary for full control of distinct departments and activities, such as the ambulance, the training school for nurses, the pathological laboratory, the x-ray apparatus, the engine and boiler room, and the electric plant.

It is not the purpose of this paper to enter into a minute discussion of the accounts to be maintained or of the charges and credits to be applied thereto, but to treat the subject informally through the medium of a chart, with sufficient explanation to bring out clearly the relationship of the accounts and their application in the workout of the final per capita cost.

With this end in view, a modern chart layout has been prepared and circulated showing the distribution by departments and the process of drawing the figures of these departments together under the final triple heading of private patients, ward patients, and dispensary or out-patients.

A successful accounting system is one designed to meet the peculiar requirements of the business under consideration, such requirements being dependent on certain operating conditions and the scope of the undertaking. No general system can be safely forced on an organization regardless of these special features of environment and magnitude, and no system can be made to fit any business when the rules of economy and real efficiency are disregarded. For these reasons the system outlined below may not meet the special requirements of any one state or municipality as to statistical data required for periodic reports, but the skeleton may be taken as a general foundation on which to build the superstructure best suited to the peculiar need of each case. Most of the accounts listed in the following chart (Chart No. 1) are set up solely for purposes of monthly comparison, by the use of which full control may be had over the various lines of expense.

The classified charge headings are indicated by the numbers 1, 2, and 3. The departments are indicated by the letters "A" to "M," inclusive. The final charge accounts are indicated by letters "X," "Y," and "Z."

Corporation expenses, being a class of expense incurred entirely in caring for the capital assets (other than the hospital proper) and obligations of the institution, are not included or calculated in the per capita cost of caring for patients.

The *direct charges* are grouped as follows: Exclusive salaries and wages; actual supplies consumed; actual expenses incurred.

The *indirect or prorate charges* are grouped as follows: General salaries and wages; general supplies consumed; general department expense.

The *administrative expenses* are grouped as follows: Salaries of officers and clerks; general expense incurred.

The pay roll should show the following distribution, kept distinct largely for purposes of monthly and annual comparison: Dispensary, emergency ward, visiting and house nursing—out-patient department; administrative officers and clerks; training school superintendent, assistants, and instructors; nurses and attendants; orderlies and ward employees; drug department or apothecary; pathological laboratory; ambulance; x-ray operator; departments as per chart, "H" to "M," inclusive.

The supply and expense accounts should include the following, also kept largely for comparative purposes:

Administrative Expenses: General office expense; stationery and printing; telephone and telegraph; miscellaneous.

Out-Patient Department: Supplies and expenses for dispensary, emergency ward, visiting and house nursing.

Training School: Supplies and expense for stationery and printing, books, uniforms, tuition fees.

Medical and Surgical Supplies: Apparatus and instruments; medical and surgical supplies; alcohol, liquors, etc.; x-ray supplies; ambulance supplies; pathological laboratory supplies.

Departments "H" to "M," inclusive: Supplies and expense.

General House and Property Supplies: Fuel,

oil, and waste; heat and power; electric power and light; gas; ice; insurance; maintenance of real estate and buildings; maintenance of machinery and tools; plumbing and steamfitting.

The *Steward's Department* may be subdivided for control as follows: Bread stuffs; milk and cream; groceries; butter, eggs, and cheese; fruits and vegetables; meats, poultry, and fish.

All specific items for salaries, wages, supplies, and expense which can be at once allocated to departments should be charged direct and cleared on the record.

All charges which can be readily segregated to the cost of maintenance of private patients should be so carried as to make it possible to transfer the accounts representing such charges direct to the final "cost of private patients" at the end of the fiscal period. Such charges would be for wages, supplies, and expense incurred specifically for the sustenance of patients or for the upkeep of buildings and equipment used solely for the private patients of the institution.

All other items of operating expense which form an integral part of the cost of the various branches of service should be aggregated and finally spread over the departments on the basis of the pay roll, or other logical method, as may be determined by the superintendent.

The final segregation of general costs prorated to the three fundamental activities of the hospital should be accomplished on the basis of the number of days of treatment provided in each class.

HOSPITAL ACCOUNTING CHART, SHOWING PLAN OF DISTRIBUTION.

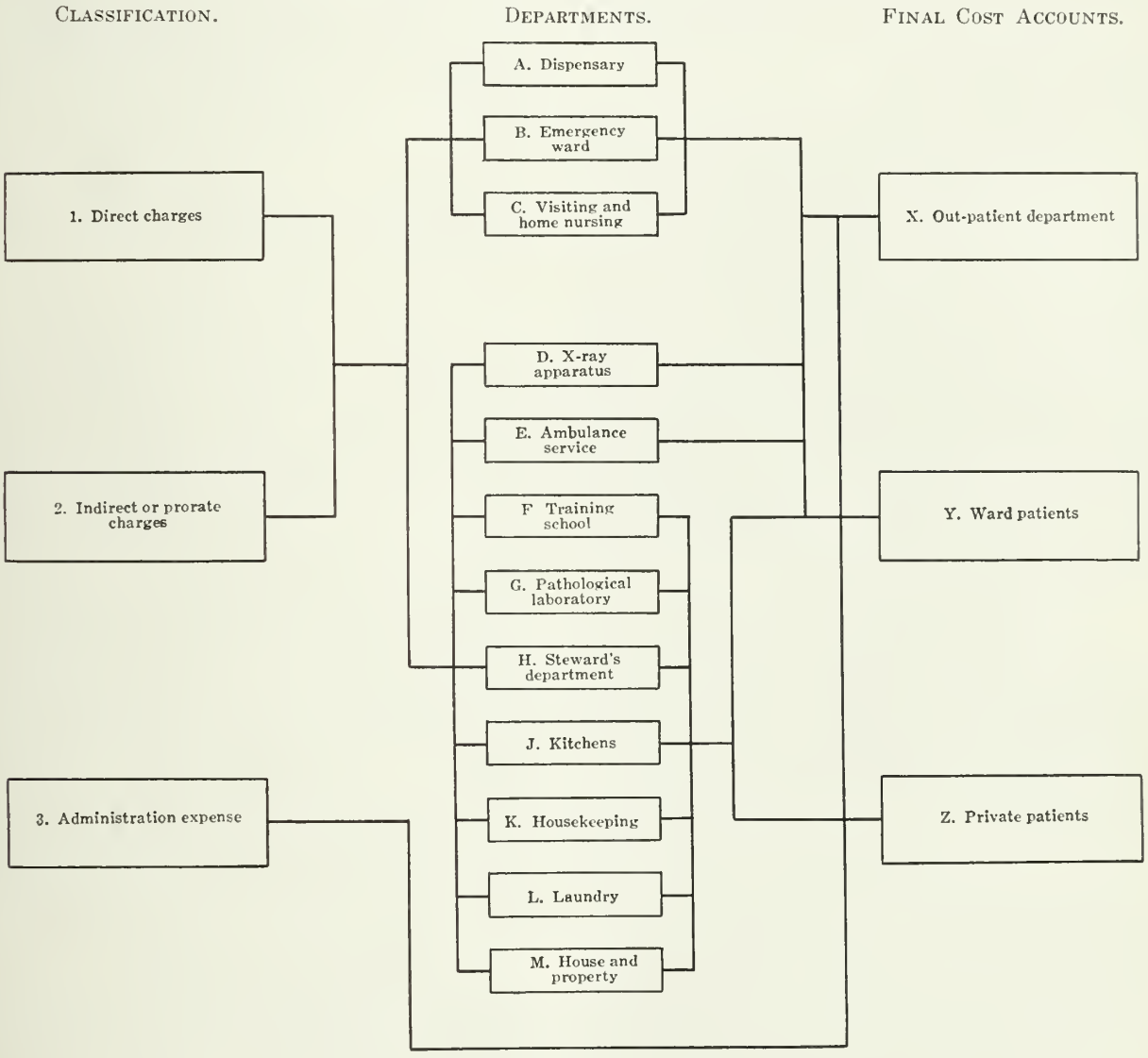

Chart 1.

THE ACCOUNTS PAYABLE REGISTER.

The problem of distributing the charges to the accounts listed above is best solved by the use of a modern "accounts payable register," which sets up, under department accounts and subheads directly from the approved invoices of purchases and expense, the complete analysis desired, the

entries being made as soon as possible after approval by the superintendent.

The method of entry on this register provides a ledger "control" on all items entered, the "control" being captioned as "accounts payable." The sheet also includes a cross-footing feature for proof on each page, and short folding leaves are utilized to permit of condensed distribution.

All costs, except pay roll items, should be put through the register, including petty cash payments, which should be spread from duly prepared vouchers, drawn at date of settlement with the petty cashier for such payments, thus making the record a complete analysis of all costs except the salaries and wages paid.

To avoid ledger postings of the monthly totals of these various register columns, the totals may be carried to a single set of distributive sheets of exactly similar form, and the aggregate of these monthly totals will give, progressively, the final totals for any period desired. The register also provides space for "invoice numbers" and a column for the *number of checks* issued in payment of the invoices listed, the object being to save space and clerical labor on the cash book by eliminating the duplicate writing of the name of the payee and the amount of each invoice. The detail is already on the register, waiting only for the check numbers to complete, and the total of invoices on the register must equal the total of the checks drawn for any month.

THE SUPERINTENDENT'S CASH BOOK.

The cash book, which works in harmony with the register, should be of the modern columned type, combining the function of both check book and cash book, and providing for the proper recording of revenue received from various sources and for the charges to the control account and the pay roll.

From the standpoint of safety and convenience in handling the questions of the receipt of current revenues and the payment of maintenance charges in the hospital, it has been demonstrated that all revenues arising from the operations of the hospital should be collected by the superintendent and by him banked to the credit of the treasurer of the managing board. The superintendent should be supplied with an "impress fund" sufficient in size to meet the current daily needs of the hospital, and to be replenished from time to time by check of the treasurer on the presentation of an approved voucher.

The major payments made each month, and which are the subject of entry and distribution on the accounts payable register, should be paid in exact total amount by the treasurer's check to the superintendent, who in turn pays the individual bills and clears his record of all cash but the "impress fund."

This treatment reduces the matter of the handling of cash to its simplest terms, and, when safeguarded in the various channels of its receipt and payment by approved accounting devices, becomes a simple and adequate solution of the otherwise troublesome question of protection against loss.

FILES FOR INVOICES.

The modern vertical file for all paid invoices, filed in folders under alphabetic distribution by dealers' names, with the last invoice always in front, is the accepted form of record keeping for close touch with such invoices for all purposes of reference for the present and future. Invoices should never be allowed to leave the files after approval and entry in the register, except for specific reference, in which case a suitable form of ticket should be inserted in the file to mark the absence and date of withdrawal.

SUPPLY STOCK.

The accounting processes to be used in following the delivery, storage, and distribution of supplies depend almost entirely as to form and detail on the magnitude of the organization and the presence of a storekeeper capable of keeping stock records and taking proper inventories. Each organization must be guided by its own physical conditions in formulating a plan of controlling stock and issuing on requisitions or request.

In the event of the maintenance of a stock room and storekeeper, the form of stock ledger best adapted to hospital use is a loose-leaf sheet, kept by quantities only, for each commodity put in stock. The balances shown on such sheets should constitute a correct book inventory of stock on hand at all times. Under conditions of sufficient clerical assistance, a department charge ledger may be kept for entry of all supplies dispensed to departments on proper requisition blanks, the record being kept in both quantity and money cost.

The stock records also described are always of great assistance to the superintendent in distributing the "indirect costs" to the various departments "A" to "M," as shown on the chart, and in carrying the correct charges into the final cost accounts at the close of the fiscal period.

PAY ROLL TREATMENT.

The form of pay roll record best suited to the specific needs of any hospital is dependent on the physical conditions in each case, the number of employees being the usual measure as to the necessity for a numerical division of departments and the method of record and pay.

Many of our hospitals still adhere to the old

plan of taking the signatures of the employees at each pay period, but, as all lines of mercantile business have long since given up this method, recognizing that it adds nothing in security or moral force to the function of "paying off," and occupies considerable time each week or month without resulting value, it would seem quite proper to advise the discontinuance of the practice and the substitution of such modern accounting safeguards as fully protect the employer against loss.

In general terms, any hospital employing over one hundred persons on its staff would do well to divide its departments numerically, pay on the number system, and record its pay transactions on a modern loose-leaf, short-folding page pay roll.

LOCATION OF BOOKS OF ACCOUNT.

The hospital accounting department, located centrally in the administrative building, is the logical place for keeping all of the accounting records of operations and, if conditions permit, the treasurer's corporation accounts and the general ledger. Many of our hospitals still retain the practice of keeping the general books in the treasurer's office, and in a few instances the checks issued in payment of current expense bills are still drawn by the treasurer and duplicate records kept by him for the same.

There is no economy in this method of procedure, and the treasurer's control is no better than in cases where the accounts are centralized, although there is some merit in the contention when a trust company acts as fiscal agent or as assistant treasurer in holding securities, handling investments, and collecting income from sources other than the hospital proper.

Let us hope that the time is not far distant when all large institutions will recognize the advantage of adopting the new and more enlightened methods of accounting control and centralized responsibility.

REVENUE TREATMENT.

The system of accounting and control best fitted to the needs of any hospital in respect to following its revenues from operations must be arranged very largely to meet the specific conditions in each case. There is a general plan that can be molded to meet special requirements, however, and an outline of such a plan is given as a suggestion for general use.

The sources of revenue from operation may be briefly summarized as follows:

1. Rent of private rooms.
2. Rent of ward beds.
3. Fees from municipality or state.
4. Charges for x-ray photographs.
5. Prescriptions and dressings sold to out-patients.
6. Charge for ambulance service.
7. Charge for use of operating room.
8. Sundry articles sold.
9. Charges for special nurses' board.

And the usual fees charged and collected for account of special nurses, physicians, and surgeons rendering special service at uniform rates. These last two items are collected by the hospital as a matter of accommodation for nurses and doctors, yielding but little income to the hospital.

Of the above nine items the revenue from Nos. 4, 5, and 6 may with propriety be treated as a relief to the costs of these three activities, the balances, after such credits have been applied, being distributable to the three final cost accounts.

The most troublesome and perplexing questions arise in connection with the charges to ward patients and their follow-up and collection. The amount of revenue from this source depends largely on the faithfulness, diplomacy, and perseverance of the entry clerk, to whose lot falls the task of meeting prospective ward patients or their relatives and of making arrangements in each case for payment of such charges as can be borne. These charges range from a fixed per diem fee of $1.50 to whatever the case can afford to pay, and, as every conceivable pretext is made to avoid responsibility and payment, the entry clerk must be keen in perception and firm in deciding where to demand payment in advance and how to secure prompt settlements during the term of treatment. Collections must ordinarily be made before the patient leaves the hospital, and here certainly is a case where "eternal vigilance is the price of liberty," for, once away from the shadow of the building, all sense of honor as to the debt incurred seems to forsake the rank and file of ward patients and their friends.

Full control over the activities of the entry clerk lies in the compulsory recording of full particulars regarding each case admitted, and the comparison of this data with the entries on the "admissions and discharge" register as to dates, location, terms, etc.

A loose-leaf or card ledger record for ward patients' accounts is generally considered unnecessary, but an alphabetically arranged register, with suitable columns for important details of bills rendered, is both operative and advisable, forming a complete running record of all paid and unpaid bills, and giving full control to the office accountant and proof for the auditor.

With the private patients' room rent and other charges the question of accounting is much sim-

pler and the collecting of bills much less difficult. Bills for regular rates on rooms should be rendered from one to two weeks in advance of occupancy, and charges for special nursing, use of ambulance, use of operating room, and articles provided should be billed in the week next following their occurrence.

A bill book, with carbon duplicate, and a loose-leaf ledger for private patients' accounts, are usually the best form for keeping track of paid and unpaid bills due by patients. The charges to these accounts should be kept posted from day to day, thus making it possible to render a bill at once on discharge of a patient from the hospital. The private patients' ledger accounts should be verified by the auditor from the "admission and discharge" register as to all details.

MUNICIPAL CHARGES.

The class of record to be kept and the form and scope of bills to be rendered each month to a municipality for treatment of city charges are usually prescribed by the city comptroller or the department of health obligated to pay such bills, and, as their decision is usually arbitrary and their requirements enforceable, it is of little use to attempt a uniform system for general use, which will probably not be operative.

CHARGES FOR X-RAY, AMBULANCE, AND OPERATING ROOM.

These charges, largely for private patients, should come through the general bookkeeper from the departments on suitable charge tickets, and be at once posted to the patients' accounts, and in the case of x-ray and ambulance charges the amount should be credited, when collected, to the cost accounts of these activities in reduction of said costs.

CHARGES FOR SPECIAL NURSING.

These charges should come through from the office of the superintendent of nurses, based on regular fees plus a charge of $1 per day for board of the nurse. The items should be posted as soon as possible to the patients' accounts, and the entries should thereafter be verified by the auditor from the pay roll of special nurses' pay.

All of the revenues derived from the above-named sources Nos. 1 to 9, inclusive, should be banked to the credit of the treasurer of the corporation.

ADMINISTRATIVE CONTROL.

Complete and successful administrative control of the hospital is so very greatly assisted by accurate cost reports and dependable vital statistics, and in fact the two questions of record and control are so intimately related in the daily work of the institution, that it is quite in order here to discuss briefly the functions and duties of the officers and their assistants, the line of authority directed by the board of trustees, the plan of distribution of the specific and general duties devolving upon the staff, and the question as to what constitutes the most economical method for securing prompt and efficient execution of the operating policy of the board.

To assist in solving the problem, there has been prepared and circulated an administrative chart (Chart No. 2), showing the lines of authority and report, and setting out the various duties to be performed by the superintendent and his assistants—namely, apothecary, chief clerk, directress of nurses, assistant to directress, housekeeper, engineer.

This chart shows the policy of management and operation emanating from the board of trustees, and its channels of direction to the superintendent—namely, the president, the treasurer's office, and the executive committee.

It shows the superintendent as supreme in his command over all departments, which are in turn operated through the direction of his assistants—the directress of nurses, the engineer, and their respective subordinates. The duties and functions of each assistant and subordinate are outlined on the chart, which may be accepted as a fair basis for the allocation of duties and obligations in any hospital, large or small.

One fact must be recognized if the scheme of organization is to be successfully maintained, and that is the need for centralization of authority and responsibility in the hands of the superintendent. There can be no division of this authority even in matters relating to the attending staff and its work, for so surely as any usurpation of power and direction is permitted to exist in any department, disorganization ensues, with the usual disastrous results. The superintendent must administer the rules and apply the penalties prescribed by the board of trustees.

Harmony among the members of the managing staff, a free exchange of views, and mutual discussions of affairs in the departments are best had through the medium of a short daily morning conference held in the office of the superintendent. Here should meet the superintendent, the directress of training school, the engineer, the apothecary, and the chief clerk, and, although the conference lasts only a few minutes, the personal touch thus accomplished proves of the greatest value in producing cooperation between departments and coordination throughout the entire operating organization.

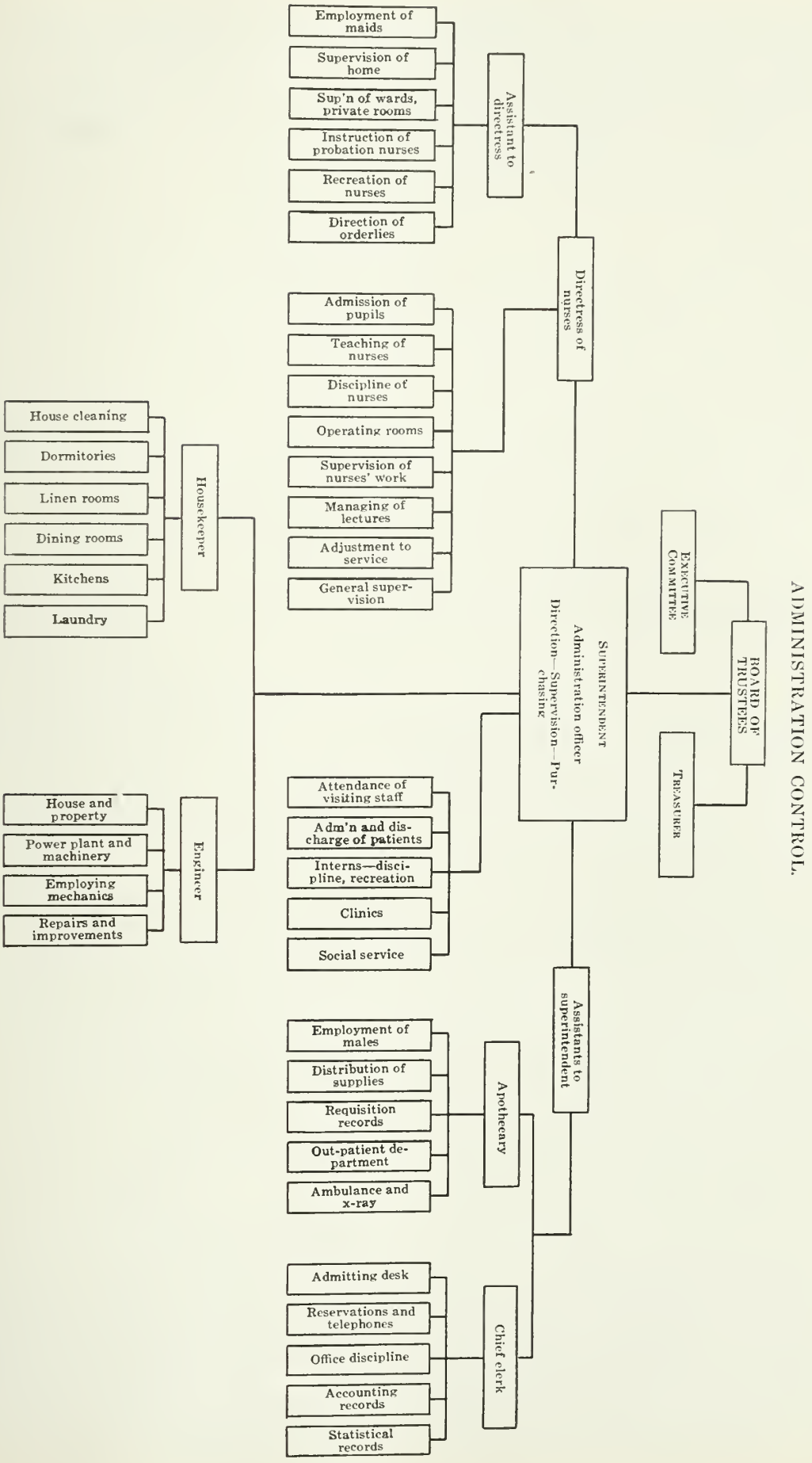
ADMINISTRATION CONTROL.
BOARD OF TRUSTEES
EXECUTIVE COMMITTEE
TREASURER
SUPERINTENDENT
Administration officer
Direction—Supervision—Purchasing
Directress of nurses
Assistant to directress
Employment of maids
Supervision of home
Sup'n of wards, private rooms
Instruction of probation nurses
Recreation of nurses
Direction of orderlies
Admission of pupils
Teaching of nurses
Discipline of nurses
Operating rooms
Supervision of nurses' work
Managing of lectures
Adjustment to service
General supervision
Housekeeper
House cleaning
Dormitories
Linen rooms
Dining rooms
Kitchens
Laundry
Engineer
House and property
Power plant and machinery
Employing mechanics
Repairs and improvements
Attendance of visiting staff
Adm'n and discharge of patients
Interns—discipline, recreation
Clinics
Social service
Assistants to superintendent
Apothecary
Employment of males
Distribution of supplies
Requisition records
Out-patient department
Ambulance and x-ray
Chief clerk
Admitting desk
Reservations and telephones
Office discipline
Accounting records
Statistical records

Chart 2.

The arrangement of the administrative chart is designed to lay emphasis on the fact that in many large hospitals too little use is made of the offices of the apothecary and chief clerk, and that substantial economies can be practiced by assigning to these functionaries the duties usually performed by an assistant superintendent, who, in many instances, is more of a luxury than a benefit to the institution.

Both the apothecary and the chief clerk are usually men of some capacity, and it has been found possible to divide up certain of the work performed by the assistant superintendent between these two men, with economical results financially and with many physical benefits. It is not supposed that every institution can accomplish successful supervision through these two specific assistants to the superintendent, but the writer believes that it is entirely possible to employ men of sufficient caliber to carry out the special duties assigned to them, as outlined in the chart, without interfering with their special duties, and in hospitals where neither the chief clerk nor apothecary is employed, the direction, supervision, and control is generally in the hands of the superintendent alone.

MONTHLY REPORTS.

A question of peculiar interest from the standpoint of the board of trustees of the hospital is that of the form of reports which should be laid before the board at its regular monthly meetings, and it is probable that today there are as many forms of reports in use for this purpose as there are hospitals in the land.

Each treasurer and superintendent has his own ideas as to the amount of detail and the method of grouping the figures which he considers interesting and important for the instruction of the board of trustees, but it may be taken as a general principle of procedure that the fewer the reports in number and the more concise and explicit the information contained therein, the more satisfactory they are, and it is always true that the majority of the members of the board are unable to assimilate the reading of detailed statements and do not care to spend time and thought on details.

In deciding, therefore, on reports that will be at once interesting, enlightening, and readily understandable, the accompanying forms—Form "A," comparative statement of income and expenses; Form "B," comparative statement of expenses and statistics as to patients treated; Form "C," budgetary report—have been prepared and are designed to show concisely the following facts of the current year compared with the same number of months of the previous year, and including

INCOME AND EXPENSES.

MONTHLY REPORT TO BOARD OF TRUSTEES—COMPARATIVE STATEMENT.

.....Months to.....1914.

Source of revenue.	1914-1915.	1913-1914.	Increase or decrease.
Hospital operations—			
Private patients			
Ward patients			
Sale of dressings and prescriptions			
Fees for special nursing			
Care of city patients			
X-ray apparatus			
Total from operations			
Other sources—			
Annual subscriptions			
Donations			
Interest on investments			
Total resources			
Total operating expenses			
Deficit for.....months			

Form A.

OPERATING EXPENSES.

MONTHLY REPORT TO BOARD OF TRUSTEES—COMPARATIVE STATEMENT.

.....Months to.....1914.

Accounts.	1914-1915.	1913-1914.	Increase or decrease.
Pay roll			
Steward's department			
Housekeeping department			
Laundry department			
Medical and surgical supplies			
Ambulance service			
Training school expense			
Fuel, light and power			
House and property expense			
General office			
Total current expenses			
Number of days of treatment			
Number of patients treated			
Per capita cost for all patients			
Number of out-patients treated			

Form B.

a statement of increase or decrease between the two periods, as follows:

Revenues from Hospital Operation: Income from private patients, income from ward patients, proceeds of sale of dressing and prescriptions, charges for ambulance service, charges for x-ray service, fees for special nursing, moneys received for treatment of city patients, and showing a total of such operating revenue.

To this is added *other revenues:* Subscriptions, donations, interest on investments, etc., thus ar-

MONTHLY REPORT ON BUDGET.

APPROPRIATIONS AND DISBURSEMENTS—YEAR ENDING..... .....1914.

Budget items.	Appropriations.			Disbursements.		
	Original.	Additional.	Total.	Balance last month.	Disbursed during mo.	Present balance.
Administration						
Training school						
Pathological department						
Ambulance service						
Steward's department						
Housekeeping department						
Laundry						
Kitchen						
Medical and surgical supplies						
Salaries and wages						
Heat, light and power						
House and property						
Social service						
General office						
Totals						

Form C.

riving at the total revenues of the hospital from income sources.

As against these totals is set up the total expense, drawn from an accompanying report, and the difference between the two items appears on the report as a deficit or surplus for the period, which may be one, two, three, four, or more months as the year progresses. In each of the above cases the increase or decrease is shown, including the net increase or decrease on the operations for the period.

This report, in connection with the comparative report of expenses for the period, as shown on Form "B," is designed to show at a glance the important features of which the board of trustees should take cognizance, and the increases and decreases shown form the basis for questions as to the cause of such fluctuations, which questions can always be answered by the superintendent, who should, by the way, attend all regular board meetings.

The above reports, in conjunction with a brief cash statement covering income and principal transactions for the month of account and a budgetary report, should constitute the file of reports to be laid before the trustees, and experience has shown that any greater detail than the above should be presented to and considered by the executive committee at its regular sessions, which should occur at least once in each calendar month.

ANNUAL EXPENSE BUDGET.

There is much to be said in favor of conducting the operating finances of a hospital, so far as the expenses are concerned, on an annual budgetary basis, and, in order to explain the plan, Form "C" is presented, showing the method of setting up the original and additional appropriations made by the board, and of accounting for the portion of such appropriations used up during each of the calendar months of the year, together with the balances of such appropriations remaining unused at the end of each month.

The writer believes that it is good executive management, leading to the practice of many economies, that several weeks in advance of the end of the fiscal year there should be prepared a budget or forecast of departmental expenses, based on the experience of the past and the forecast of the future, and that such budget should embrace all of the lines of expense of the hospital, and be criticised and finally approved by the board of trustees, and used by the superintendent as the basis of operations for the coming year.

The plan keeps constantly before the eye of the superintendent the progress being made in the consumption of the appropriations, and he knows that he cannot expend sums in excess of the appropriations made without calling on the trustees for additional appropriations after clearly stating reasons why such additional appropriations are necessary. This direct obligation on the superintendent has a distinct tendency to check extravagance, and to compel careful scrutiny of and constant attention to the matters of consumption and waste, and the writer fully believes that no more powerful restraint than the budget can be imposed on the administrative head.

The consideration of the figures contained in

the budget is a matter of great interest to the board of trustees, and induces a careful study of hospital conditions by those in whom is reposed the trust of conducting the hospital on careful and efficient lines.

As stated at the inception of this paper, it has been the aim of the writer to cover the ground as far as possible without going into minute detail and without making the paper uninteresting to the audience.

The little pamphlet placed in your hands, including, as it does, one administrative chart, one accounting chart, two report forms, one budget form, and explanatory notes amplifying the general headings contained in the accounting chart, will supply you with some useful information, and can be taken in connection with descriptive paragraphs of accounting forms and processes which are contained in this paper, but which have been omitted in the reading by reason of their innately uninteresting contents.

The paper, as a whole, will probably be printed in THE MODERN HOSPITAL and in the year book of the association, and the writer will be glad to furnish further details as to the workout of the above plans and the significance of the charts and forms submitted. You will recognize, of course, that it is impossible to include, in the brief time allotted for the reading of this paper and in the comparatively brief space allowed for publication, the discussion of the full plan of operation.

The writer hopes, however, that the contents of this paper may be of service to the hospital community, and that it may be of assistance in ultimately reaching a simple plan of uniform accounting and report for hospitals which may be of lasting benefit both financially and from the standpoint of statistical information.

NEW PSYCHOPATHIC HOSPITAL FOR CHICAGO MARKS NEW ERA.

Modern Methods of Treatment of Mental Cases Coordinated With Special Architecture—Curative Measures Substituted for Drugs and Restraint—Archaic Laws Still Brand Mental Patients With Stigma of Insanity.

BY HAIM I. DAVIS, M. D., SUPERINTENDENT.

AS late as thirty years ago the insane of Cook County were inmates of the Cook County jail, where the facilities for taking care of them were naturally very meager. The first Cook County Detention Hospital was built about twenty-seven years ago, with a bed capacity of 90. Besides insane, feeble-minded children were also taken care of there. It had very little semblance to a hospital—nothing in the way of a nurse, an intern, or a record, not even a medicine chest was to be found there.

The county physician, single-handed, had to take care of all these people. The only assistance he had was male and female attendants, who excelled in the great brutality with which they handled patients. It looked as if the idea of the middle ages that an insane person was in the hands of the unholy one still prevailed. The average physician had very little knowledge or acquaintance with this branch of medicine for the simple reason that the great majority of graduates of medical schools, especially in the West, hardly ever heard a lecture on the subject, and never had opportunity for clinical observation of mentally disturbed patients.

The present superintendent of this hospital first took charge of the institution about ten years ago. He succeeded with the meager means at hand to improve the service in the direction of transforming it into something that could be called a hospital. Physical and drug restraint of all kinds had been in full swing. Attendants were handing out strong solutions of bromides and other drugs in doses and at times to suit themselves. The placing of the first trained nurse in the hospital caused almost a riot; it was considered an infringement on the rights of the attendants when they were asked to accept the orders of the physician through a nurse in charge.

Although the use of hydrotherapeutic measures for the allaying of restlessness in mentally disturbed patients was known for nearly a century, it was rediscovered, so to say, a little over twenty years ago, and the Cook County Detention Hospital was one of the very first institutions in the West to be equipped for all sorts of hydrotherapeutic measures, thus giving us an opportunity to cut down the use of drugs to a minimum. Drug restraint is very often worse than physical restraint.

With the increase in population, and with the better recognition of mental diseases by the average physician, who within the last few years has been getting some training in this line, the number of admissions to the Detention Hospital has increased with great rapidity, so that from 600 patients per year admitted to the Cook County Detention Hospital about twenty years ago, the number for the fiscal year from December 1, 1912, to December 1, 1913, was 2,477.

Fig. 1. Cook County Psychopathic Hospital—Front and side view.

Always conscious that the facilities at the Detention Hospital, while greatly improved, were still very far from what was desired, and having become satisfied that the functions of such an institution must be greatly developed in many other directions outside of the actual care and treatment of so-called insane people, the idea of a psychopathic hospital took root and was developed, and at the present time we are occupying the new hospital.

Fig. 2. Cook County Psychopathic Hospital—Outside stairs and screened porches.

Generally speaking, the functions of a psychopathic hospital are twofold:

1. The actual care of patients who have been unfortunate enough to break down mentally. A modern psychopathic hospital should be equipped to the extent of giving this class of patients the

Fig. 3. Cook County Psychopathic Hospital—Reception hall and social service department.

very best of scientific care and nursing, so as to facilitate the most rapid recovery where recovery is possible.

2. The more important function of ascertaining, by way of proper laboratory, psychological and pathological work, the underlying causes of abnormal mental states, and, once having ascertained such causes, to prevent by proper instruction of medical men and of the public the increase,

Fig. 4. Cook County Psychopathic Hospital—Out-patient department, examining rooms, and pharmacy.

and possibly even the development, of some forms of mental alienation.

This institution has properly been placed in close proximity to the large general Cook County Hospital, for the following reasons:

1. Many of the admissions to the Cook County Hospital show mental abnormalities when admitted to the hospital, or develop such abnormalities after admission; their transfer to the Psychopathic Hospital is thus facilitated. One hundred and eighty such transfers were made from December 1, 1912, to December 1, 1913.

2. It relieves us of the necessity of establishing separate surgical and obstetrical wards, as we can easily have patients in need of such treatment temporarily transferred to the general hospital.

3. The introduction of the psychiatrist into the general hospital is filled with the greatest possibilities for medicine, says Dr. W. A. White.

4. There are continually found in every general hospital different forms of deliria, different forms of neuroses of the gastrointestinal tract, abnormal reactions accompanying puerperium and lactation, which can be best taken care of in the new Psychopathic Hospital.

At the present time there are in existence in this country the Phipps Psychopathic Hospital in Baltimore; the Boston Psychopathic Hospital; the State Psychopathic Hospital at Ann Arbor, Mich.; and the Psychopathic Ward at the Bellevue Hospital, in New York.

This new Psychopathic Hospital has a frontage of 160 feet on Wood street and 156 feet on Polk

Fig. 5. Cook County Psychopathic Hospital—Court room.

street. The building is five stories in height on Wood street and four stories on the side wings. It has a bed capacity of 230. The building is reinforced concrete, tile and fireproof construction, with drawn steel door and window trim, and steel furniture. The floors of corridors, bath rooms, kitchens, and other service rooms are of artificial marble tile. The floors of all wards and offices are of imported battleship linoleum, solidly cemented to the concrete floors. The building is equipped with two passenger elevators, one of them of the push-button type. Many of the rooms are ventilated by exhaust ventilating fans, but the majority of the rooms and wards have such excellent natural ventilation that a mechanical system is unnecessary. Richard E. Schmidt, county architect, of the firm of Richard E. Schmidt, Garden & Martin, was the architect for this building.

The building, completely equipped and furnished, cost approximately $470,000, which makes the cost per bed $2,100, which is very low for a fireproof building throughout that contains such complete equipment for the treatment of this class of patients.

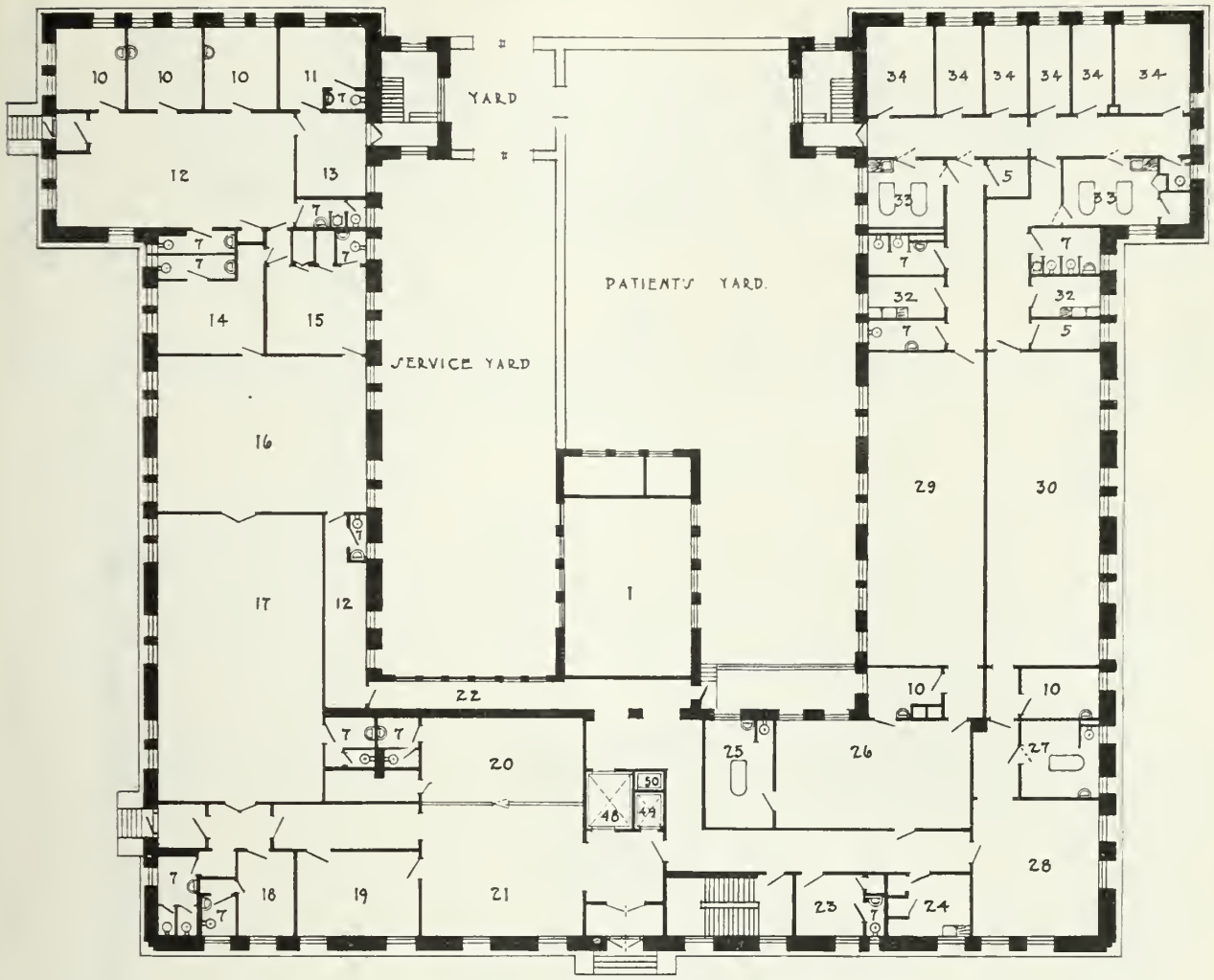

Fig. 6. Cook County Psychopathic Hospital—First floor plan.

1. Kitchen wing.
5. Linen room.
7. Toilet.
10. Examination room.
11. Doctors' coat room.
12. Patients' waiting room.
13. Out-patients' room.
14. Jury room.
15. Judges' room.
16. Court room.
17. Witness room.
18. Private room.
19. Directors' room.
20. Social service room.
21. General waiting room.
22. Patients' corridor.
23. Head nurse's office.
24. Serving room.
25. Entry bath for women.
26. Receiving nurse for women.
27. Entry bath for men.
28. Receiving nurse for men.
29. Receiving ward for women.
30. Receiving ward for men.
32. Utility room.
33. Hydriatric room.
34. Disturbed patients' wards.
48. Public elevator.
49. Private elevator.
50. Dumb waiter.

The first floor contains the administration offices, rooms for social service workers and investigators, out-patient department, court room, male and female receiving wards, and head nurse's room.

Each of the north and south wings of the remaining three floors represents a unit, consisting of rooms with single beds, two beds, and three beds, and a small ward (capacity, 12 beds), nurses' service room, dining room, examining room, room for visitors, and six single rooms for disturbed patients located at the end of the wing, and separated from the rest of the unit by a corridor. The wings of the fourth floor differ in that the general wards are larger, having bed capacity of 18 beds in each ward.

The fifth floor is given to hydrotherapeutic apparatus, consisting of batteries of continuous tubs, showers, sprays, sitz baths, tables for massage and packs, electric cabinets, and rest rooms. These rest rooms are equipped with small ice boxes for holding cooled water, milk, or other beverages that may be offered to the patients. These rest rooms are for the use of the patients who are receiving hydrotherapeutic treatment. On the fifth floor is also our laboratory, with its modern equipment, and surgical dressing rooms. The placing of the main part of our hydrotherapeutic apparatus on the fifth floor I consider of great advantage—sunlight and air are thus available.

Each wing is provided with continuous baths in close proximity to the single rooms set aside for disturbed patients, thereby facilitating the treatment of such patients. Each wing is also provided with a very large day room, which connects with inclosed porches that extend the whole width of the main building.

The out-patient department has a separate entrance on Polk street. It is our desire that the doors of this department shall be wide open, so

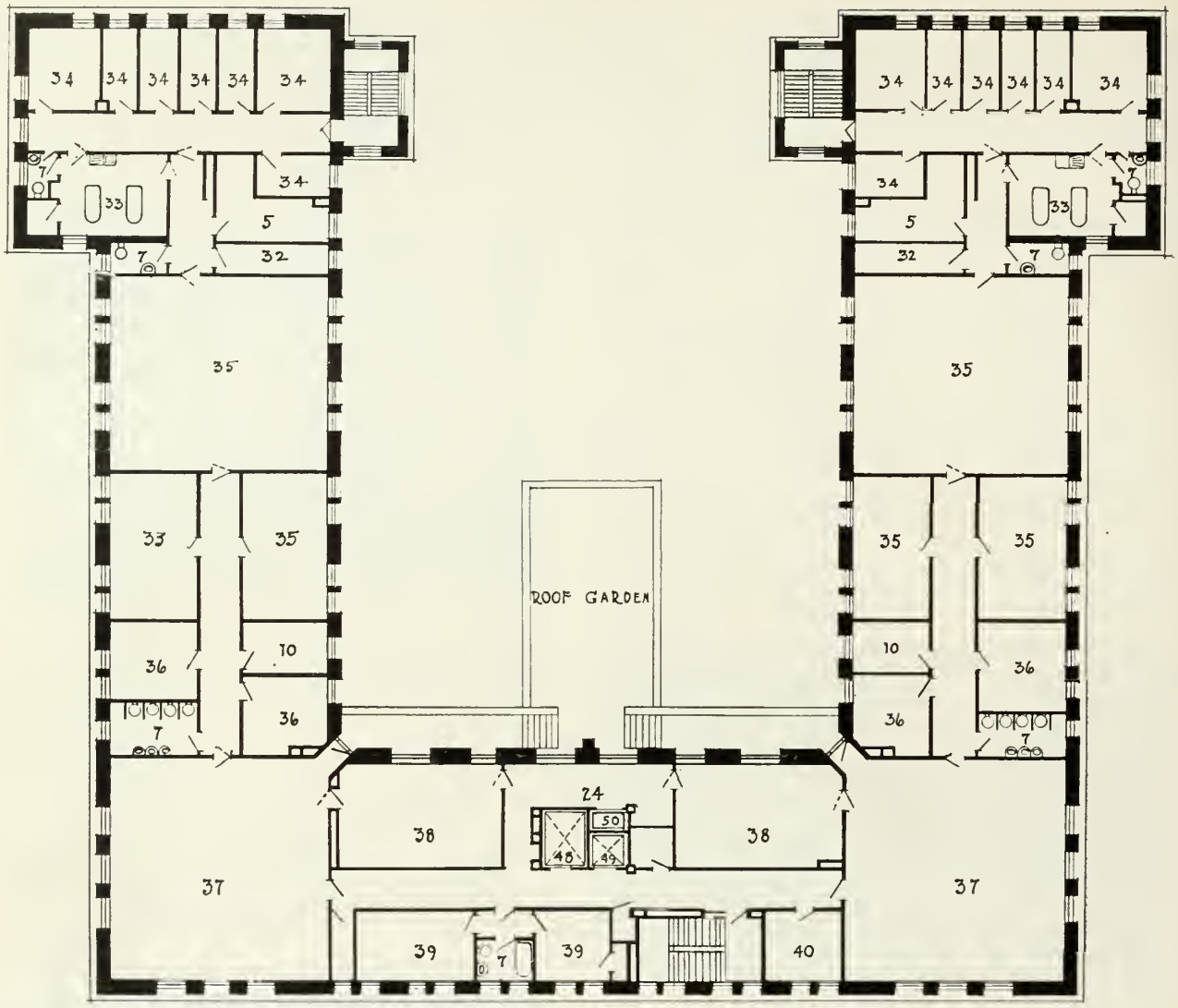

Fig. 7. Cook County Psychopathic Hospital—Typical floor plan.

5. Patients' clothes room.
7. Toilet.
10. Examination room.
24. Serving room.
32. Utility room.
33. Hydriatric room.
34. Disturbed patients' wards.
35. Ward.
36. Private ward.
37. Day room.
38. Patients' dining room.
39. Interns' bed room.
40. Visitors' room.
48. Public elevator.
49. Private elevator.
50. Dumb waiter.

that everyone who feels in need of such treatment will have a right to come here for our services.

Of the 2,477 admissions to the hospital during the last year, many were paroled from the various state institutions. Overcrowded conditions at the state hospitals very often compel their superintendents to parole or discharge patients before they are really capable of taking care of themselves. The result is that, after spending only a short time at home, they are promptly returned to us. This proposed out-patient department should take care of this class of patients, and assist them in every way possible, by having actual supervision over them.

Facilities have been provided for teaching purposes, and a large room, used as a waiting room for witnesses on court days, with its special entrance, lends itself admirably for clinical purposes. Bedside observation of patients for small groups of students is also intended.

The social service department has been a feature of the old Cook County Detention Hospital, and it is intended to extend its influence. We now have the services of five nurses of the Illinois Society of Mental Hygiene, which is a branch of the National Association of Mental Hygiene, whose object it is to advocate measures for the proper study of the causative factors of mental alienation, the proper treatment of insane, and their after-care when they are released from the various state institutions. This society has done a great deal of good in awakening the public conscience to the enormity and gravity of this problem in our social life. The five nurses investigate all cases admitted to the hospital.

A word as to our laws regarding the commitment of so-called insane. While the need of a special institution such as we have now established is obvious, it is feared that it will not exercise its greatest usefulness unless conditions regulating

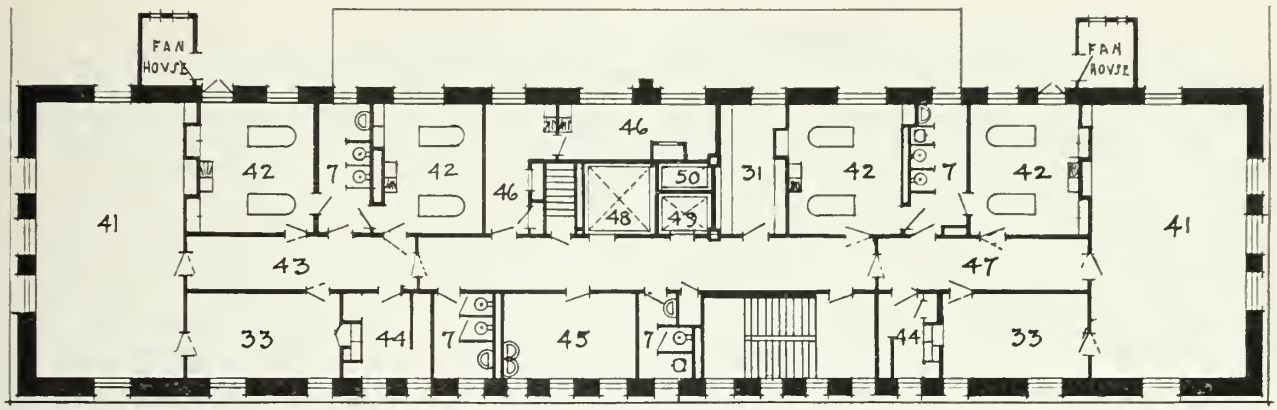

Fig. 8. Cook County Psychopathic Hospital—Hydrotherapeutic department on top floor.

7. Toilet.
31. Main linen room.
33. Hydriatric room.
41. Rest and pack room.
42. Continuous bath.
43. Women's hydrotherapeutic department.
44. Work room.
45. Surgical dressings.
46. Laboratory.
47. Men's hydrotherapeutic department.
48. Public elevator.
49. Private elevator.
50. Dumb waiter.

the admission of patients to the hospital are changed. It should be possible for persons suffering from so-called insanity and conditions classed as border-line cases to enter the hospital without any legal procedure.

According to our laws, an order from the county judge committing the patient to this institution must be procured before the patient can be admitted. The law also provides that the cases must be disposed of within ten days after admission. An attempt has been made during the last session of the Legislature to extend the limit to forty days, but so far we have not been successful. The entire question of legal technicalities surrounding the admission of patients to our hospital is far from satisfactory, and all of our institutions will be handicapped from doing the greatest good to the people of our state until it becomes possible for patients to avail themselves of treatment with no more embarrassment than now attends the admission of patients to any general hospital.

Everything that we can possibly do to prevent the stigma of insanity being attached to our patients will redound to the good of our institutions. Until a short while ago the great majority of our patients were brought to our institution virtually as prisoners in the hands of the police. As far as our women patients are concerned, this has been discontinued entirely. When properly notified, the hospital sends out an automobile in care of a nurse to bring such female patients to the hospital. Since this measure became operative we do not receive as many excited and disturbed women patients, and handcuffs and straps are not seen as often as in the past. This has had a most beneficial effect on the patients. About forty women patients are brought to the hospital this way every month. Quite a few of the women patients are brought in by their relatives, so that it is a rare sight now to see a woman brought to the hospital in a patrol wagon.

Steps have been taken to enlarge the staff, and it is our intention to secure the services of an expert pathologist and psychologist.

The institution, as it is now conducted and has been for years past, is a free institution, but there seems to be no valid reason why relatives of patients maintained by Cook County, if they are financially able to do so, should not pay for the maintenance of such patients while they are in this hospital. The drawback to such arrangement is that, according to our present laws, the county has no right to conduct anything but a free institution.

PAID TEACHERS AT JOHNS HOPKINS.

Professors in All Departments to Be Paid Full Time—Records New Epoch in Medical Education.

Recently securities valued at $1,500,000 were presented to the Medical School of Johns Hopkins University by the General Education Board. The gift is to be known as the William H. Welch Endowment for Clinical Education and Research. In the acceptance of the gift the university board announces an accomplished fact of the long-cherished desire to change its teaching organization to include all-time paid teachers in the medical school faculty. The fund will earn interest sufficient to embrace in the innovation the departments of research medicine, surgery, and the diseases of children.

The university board has announced the heads of the three departments under this fund: Dr. Theodore C. Janeway, until now professor of medicine at Columbia University, is the new professor of medicine; Dr. William S. Halsted, whose whole life has been spent at Johns Hopkins, is to continue as professor of surgery; Dr. John Howland, formerly of Brooklyn and until a year ago of Washington University, St. Louis, is the new professor of pediatrics.

Arrested for Using Red Cross.

The recent arrest of the mayor and city clerk of Milwaukee was the first movement in a national crusade against the use of the Red Cross emblem for commercial purposes. It was claimed by the United States district attorney that the city was violating the act of using the emblem on the caps and sleeves of inspectors in the sanitary division of the health department. Mayor Bading declared the insignia had been adopted during his administration as health commissioner in 1910, and never regarded as a violation of the law.

"TWILIGHT SLEEP" FROM THE HOSPITAL VIEWPOINT.

Reasons Why Use of Scopolamin by Americans in Past Was Unsuccessful—Secret of Freiburg Success—Technic of the Conduct of Labor—Hospital Accessories and Nursing Care.

By WILLIAM H. WELLINGTON KNIPE, A. M., M. D.,
ADJUNCT PROFESSOR OF OBSTETRICS, NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; ATTENDING OBSTETRICIAN GOUVERNEUR HOSPITAL.

THE Freiburg method of producing that state of mind called "Daemmerschlaf," or twilight sleep, by the injection of drugs is one that must be almost exclusively carried out in a hospital, and it may be advantageous for us to consider what arrangements in the hospital are best suited to this method of relatively painless childbirth.

During July of this summer I had the pleasure of spending a couple of weeks at the Frauenkninik at Freiburg, and there had the opportunity of becoming intimately acquainted with the method of inducing twilight sleep. Having used scopolamin and morphin in my hospital work several years ago, and having discarded the method as dangerous, I entered Freiburg a skeptic; and it was only after repeated demonstrations of successful twilight sleep that at last I became a convert, and I was forced to admit the poor results that we had obtained previously with scopolamin and morphin were due to the fact that we did not follow the Freiburg method.

Inasmuch as the Freiburg treatment is bound to become the method of the future, it will become necessary for the hospital to have proper accommodations for these cases.

The one requisite for the proper induction of twilight sleep is quiet. The proper location of the delivery room is on an inside court, where the least possible noise obtains. All care should be exercised that the noise from the rest of the hospital should not reach the twilight room. This quiet may be procured by double doors, padded doors, rubber matting, etc. In the private operating room, where only one patient is at a time, it will be relatively easy to obtain this desired quiet, but in the ward operating room, where there may be two or three patients at one time—which, of course, is unavoidable in a large service—one patient may disturb another to some degree.

Besides quiet, means must be used to obtain darkness. It is not necessary that this should be intense, but all care should be used to prevent the entrance of bright light. At Freiburg the ward delivery room opens on a courtyard, with trees about, and by the use of Venetian blinds the room is kept relatively dark. During the induction of the twilight sleep the patient is kept in the delivery room in bed, and, inasmuch as the process consumes generally several hours, it is impossible to keep the patient on a hard operating table all this while. At Freiburg the delivery room contains three beds, and it is in these beds that the women are delivered, the operating table being used only for those cases requiring operative interference, such as forceps, version, etc. Each bed is screened from its neighbor by curtains of muslin, and the rest of the delivery room is like an ordinary operating room, with the regulation aseptic furniture, sterile receptacles, instrument trays, etc.

NURSING.

As the proper induction of twilight sleep requires the constant attendance of a trained physician or trained nurse, the management at Freiburg secures intelligent nurses and trains them in this method, and they are used in the operating room and nowhere else. Before being placed in charge of a case, the nurse must have at least four months' experience as assistant in the delivery room.

The nurse examines the fetal heart every fifteen minutes, tests the patient's various reflexes, and gives the injections accordingly—subject, of course, to the instructions of the physician, who regularly calls every hour to examine the patient. These nurses at Freiburg, who have had this special training for a long time in the delivery room, become particularly expert, and it will become necessary for us in America to take especially intelligent nurses, who are interested in this work, and train them in this particular method.

DRUGS USED.

The drugs used are scopolamin hydrobromic and some one of the morphin derivatives—either morphin muriate, or narcophin, or pantopon. It has been difficult to obtain a stable solution of scopolamin. The method used to sterilize the solution leads the way to quick decomposition, and the solution which has a certain strength today may in a couple of days lose a great deal of its potency. To obtain a stable solution, Professor Straub, of Freiburg, added the sexatomic alcohol mannit to the scopolamin solution. This has been manufactured by one of the German drug firms according to Professor Straub's directions, but

there seems to be no reason why the chemist should not make up a stable solution for hospital use by the addition of mannit, so that 1 c. c. of the solution equals .0003 gram of scopolamin. The morphin muriate solution should be made up for hypodermic use in the regular way, so that 1 c. c. equals .01 gram of morphin muriate. Or, if narcophin be used, a solution in which 1 c. c. equals .03 gram narcophin. If pantopon be used, 1 c. c. solution equals $^1/_3$ grain of pantopon. It is convenient to have these solutions put up in ampules, but this is not essential. It is advisable to have two syringes—a 2 c. c. size for the scopolamin and a 1 c. c. size for the morphin—which will measure accurately the decimals of the c. c. At Freiburg record syringes, with a needle suited to both syringes, are used.

Within twenty-four hours after the birth of the child at Freiburg, passive exercises are instituted of the upper extremity, abdomen and back, and lower extremities and perineum of the patient, and it will become necessary in hospital work to instruct the nurses in the method of giving these exercises, which consist in flexion and extension of the extremities, raising the patient to a sitting posture in the bed and allowing her to return to the lying position, and in separating the knees with the patient resisting, and in approximating the knees against the patient's resistance. The patients take kindly to these exercises, and claim they feel very much better after them. On the second day of the puerperium the patient sits up in bed, on the third day sits out of bed, and on the fourth day walks about the ward.

During all this time the exercises have been continued night and morning, and it is surprising with what rapidity the uterus involutes under these circumstances. If the patient is running a temperature, or if there has been a bad laceration of the perineum, the patient is kept in bed for a longer period and the exercises are not taken.

During the course of labor in twilight sleep, accurate notes must be kept of the injections given, their kind, number, origin, etc. The subjective symptoms of the patient must be noted concerning drowsiness, thirst, and pains in the back, abdomen, and perineum. Charts must be kept of the objective signs, such as sleeping during or between pains, motions of the hands, the color of the face, the influence of the drugs on the pains, consciousness of the patient, and the amount of excitation, if present. Note is also taken of the number of examinations, when interference becomes necessary, and the effect of drugs on the voluntary muscular efforts in the second stage of labor. It is also noted whether the pains are frequent, whether they are of long duration, and whether they are strong. The fetal heart is kept track of every fifteen minutes, as is also the maternal pulse and maternal breathing, and the patient's pulse is taken every hour.

It is only by keeping strict record of these conditions that one is able to judge of the value of this method. Charts should be kept designated "Criticism of the Twilight Sleep," in which there should be divisions concerning (1) success of the treatment, (2) character of the pains, (3) the voluntary muscular efforts of the patient, (4) postpartum hemorrhage, (5) condition of the newborn, (6) what combination of scopolamin with morphin or other narcotic has been used, (7) any special remarks that may be indicated.

Promotions at Johns Hopkins Hospital.

Dr. Carl H. Van Norman has been promoted to the position of first assistant superintendent at the Johns Hopkins Hospital, to succeed the late Dr. Rupert Norton. Dr. Van Norman has been for the past year and a half second assistant superintendent. Dr. Ralph B. Seem has been promoted to the position of second assistant superintendent, and Dr. Lewis A. Sexton, of New York, has been appointed third assistant superintendent. Dr. Sexton has had several years of experience in hospital executive work. He is 37 years old, and graduated from the Vanderbilt University in 1905, since which time he has been on the staff of different hospitals of the contagious disease branch of the New York Health Department. For the past six years Dr. Sexton has been resident physician and assistant superintendent under Dr. Robert J. Wilson, of the Willard Parker and Reception Hospitals, East Sixteenth street, New York City. The Willard Parker and Reception Hospitals have about 550 beds for the accommodation of scarlet fever, diphtheria, measles, and other contagious diseases.

Miss Greener Honored by Mt. Sinai.

The following announcement has been received by THE MODERN HOSPITAL from Mt. Sinai Hospital, New York:

"The Board of Directors of the Mount Sinai Training School for Nurses begs to announce the appointment of Miss Elizabeth A. Greener as superintendent of the school. Miss Greener is expected to begin her duties during the early part of October. She is a graduate of the New York City Hospital, and was assistant superintendent at the City Hospital for four years.

"Miss Greener has been superintendent of the Hackley Hospital, Muskegon, Mich., for the last seven years. The Hackley Hospital has been considered the finest of the small hospitals of the country, and was selected by the board of THE MODERN HOSPITAL magazine as a model institution for a series of articles, which articles were written by Miss Greener and have appeared in THE MODERN HOSPITAL.

"Miss Greener has been very active, and has done considerable work with the Michigan State Board of Examiners. She is president of the Michigan State Nurses' Association and was formerly president of the State League for Nursing Education."

Carpenters are putting the finishing touches on the new building of St. Francis Hospital at Cape Girardeau, Mo.

The MODERN HOSPITAL

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Contributors, subscribers, and readers will find important information on advertising page 26.

The St. Paul Meeting.

The St. Paul meeting has come and gone. It was a good meeting, but not nearly so well attended as it should have been. There were good papers, but too many; there was good discussion, but not enough; too few people took part; too few people who could have profited most by the meeting sat still, listened attentively, and lost a good deal because of the lack of the stimulus of active participation.

We are beginning to see some faults in the method of conducting the sessions of the association. The large convention hall at St. Paul was too easy of access, too many people ran in and out and made too much noise, so that those who really wanted to hear what was going on could not do so.

While there should be no intention to deprive anyone of participation in the meetings of the association, the business sessions should be conducted with closed doors, open only to active members of the association who have a right to vote; and there should be two business sessions during the convention—one just following the first formal session on the first day, and another on the afternoon of the last day. The public generally and associate members do not care about the business sessions of the meeting; they do not care about the reports of standing committees of a business kind; they do not care about the details of administration of the association, and these things must be done by the whole association until a board of trustees is finally inaugurated.

Nor does the public care about the little friendly politics concerned in the selection of a meeting place and the election of officers, but these things are necessary and the active members who have a vote must attend to them. Why not make the meeting at which these things are done closed to all excepting those who have a voice—not with a view to shutting out anybody, to preventing the participation of anyone, but merely to expedite the business and to carry it on in a workmanlike manner?

The commercial exhibit at St. Paul was one of the best things at the meeting. There were enough exhibitors, and they expended enough money on their exhibits to make us certain now that if the commercial exhibit of these association meetings were got up in a businesslike way, by people paid to attend to the work, it could be made not only one of the most instructive parts of the conventions, but could be made largely remunerative, and could perhaps pay all the expenses of the association for the year, leaving the dues and fees for the free use of the association for important scientific purposes.

The noncommercial exhibit was not very good. There seems to be a want of perception on the part of hospital people as to what the noncommercial exhibits should show. There are literally hundreds of valuable things in the hospitals of the country that would be a liberal education to other hospital people, and these things ought to be exhibited. It seems, however, that the business of securing such an exhibit will have to be somewhat changed. A good many people who have valuable things that they might show do not know just how to go about it; some of them feel that they ought not to be called on to pay the expenses of getting their stuff to and from the exhibition. It would appear that the association should pay transportation on the noncommercial exhibit, and should attend to unpacking and repacking and reshipping to the homes of the exhibitors. The association, it would seem, should also set up the exhibition space, decorate it, and make it attractive as well as instructive.

There were too many papers on the program at St. Paul, and the papers were too long. Undoubtedly Dr. Howell was protecting himself, in preparing so long a program, against the disinclination of members to discuss papers. It is an impossible thing to get up an attractive and spirited meeting unless there are lively discussions; the only alternative, of course, is enough papers to fill up the whole program. But at St. Paul there

were probably more people who would have been willing to discuss papers if they had been urged to do so. It seems as though the presiding officer of the American Hospital Association must have some of the attributes of a banquet toastmaster, and that he will have to help carry the sessions along by versatile comments and a quip here and there. Nothing serves to so break the formality of a meeting as a warm human touch and a ready, versatile wit on the part of the presiding officer.

As for the social side of the meeting, it was all that could have been asked for. First of all, our host, the St. Paul Hotel, made us all feel that we were welcome. That is a wonderful hotel. It is new, apparently close by every part of the beautiful city, and its service was all that could have been desired. It means very much to a convention to meet in a hotel where there seems to be a sympathetic interest in the convention on the part of everybody from the manager to the bell boys. And another nice thing: although the hotel was very crowded, everyone, without exception, seemed to be provided with accommodations that just exactly pleased him or her—and that means a great deal too.

Dr. Ancker, chairman of the committee of arrangements, Dr. Baldwin, Mr. Olson, Miss Keller, indeed everybody, endeavored to do everything they could for the pleasure and enjoyment of their guests. All in all, St. Paul was a most successful meeting.

Dr. Mayo's Paper at St. Paul.

Dr. Charles H. Mayo's paper, read before the St. Paul convention, was an illuminating document. We hospital administrators become accustomed to a close view of things as they go on in our institutions. We have no perspective. The physician or surgeon, on the other hand, doesn't see our petty worries of administration, and can, therefore, get a better view of the highlights of the hospital.

Dr. Mayo's paper was a veritable kaleidoscope of high-lights; moreover, he touched on points that most of us, confined in our activities to executive work, regard as too delicate a matter for us to handle—at least without gloves, as Dr. Mayo has done. Medical staff members will find very much for study in Dr. Mayo's paper, and hospital trustees will find some things there that will help them enormously if they but realize the fact.

Most of us talk about our purchasing department and the stopping of wastes in the hospital. We think we do well if we can practice petty economies, but, when all is said and done, Dr. Mayo has touched the very quick of the whole problem of efficient and economical hospital administration.

Keep exact records of what the physician and the surgeon are doing, just as we keep books on ourselves; weed out the inefficient, the dishonest, and the untrained; see whether our diagnoses are being made according to the best that medical science has to offer before our patients are operated, and this can be told by honest, competent reports; see whether the operations are done with that amount of skill that will get patients out of bed and well again promptly, as measured by the state of surgical science; see whether patients are being operated unnecessarily and for diseases that they do not have. Is Dr. Mayo right, and are patients in hospitals being operated because they can pay a fee, and is the answer to this question available to the trustee in the hospital and the efficient administrator? Are patients being kept in bed, following operation, for two, three, and four weeks longer than the state of surgical science makes necessary?

It is highly necessary that we practice economy and efficiency in all departments of our hospitals, but, after all, efficiency and economy are measurable in terms of sick people cured. No matter how well we do in other departments, if our physicians and surgeons are not doing well in theirs, they can vastly reduce the number of people benefited and hence vastly increase the cost of service to the sick.

Our own economies in our physical departments are pigmy beside those that can be practiced by an efficient and honest medical staff. Dr. Mayo's paper furnishes food for very serious thought not only to the hospital people, but for everyone who is seriously concerned about the public welfare.

More Trouble at Cincinnati.

The magnificent new five-million-dollar municipal hospital at Cincinnati seems destined to trouble "as the sparks to fly upward." A year ago Dr. Summersgill, a highly trained and thoroughly efficient administrator, was forced out of the management by petty politics. Merely as going to show the estimate placed on Dr. Summersgill's abilities by people who are capable of judging, it may be stated that he was "grabbed up" by the University of California for the superintendency of the magnificent teaching hospital now in course of construction at Berkeley.

Now Dr. Charles F. Sanborn, who has been at the Cincinnati hospital only a few months, is being forced out by the same insidious agencies that caused Dr. Summersgill's retirement. Dr. Sanborn had made his reputation as an adminis-

trator of the first class before he went to Cincinnati. He has not all of a sudden become incompetent. He is just as good a man as he was when he passed the highest in competition with twenty-five trained hospital men for the medical wardenship of Cook County Hospital. He is just as good now as when he was chosen for Cincinnati at the end of a competitive examination, and backed by the strongest possible letters of commendation from many of the best medical men of Chicago, who knew his work.

Some of the best men of Cincinnati, men who have the hospital's best interests at heart, and who are wholly disinterested in their devotion to it, have expressed sincere regret that Dr. Sanborn is leaving; and some of them, who know, say that he was giving a splendid service and had inaugurated many improvements, and that he had many more in mind if he had been given a free hand.

If it was not the fault of these two able men that they left Cincinnati, whose fault was it? Where is the insidious influence that is preventing progress in the Cincinnati General Hospital? We leave the answer to the people of Cincinnati and to the medical profession of that city.

Just one thought more: Cincinnati has a new hospital, very large for the size of the city, and, by reason of its peculiar type of architecture, one that will cost a great deal of money to administer. Unless someone is placed in charge there who is a master hand at institution management, and who is to be given a free hand to organize its forces properly, the city will pay some very large sums of money unnecessarily, and it will pay even more in the shape of inefficiency in the care of the sick poor. Is it conceivable that an industrial corporation would spend $5,000,000 for a new plant and put it in charge of a novice in the business that was to be done in it? And is there an industrial business whose output is so valuable as that of a hospital, or one in which mistakes can be so costly?

"The Ill Wind—."

Now that the war is developing the great extent to which this country is dependent on Europe, especially for scientific supplies, such as chemicals, drugs, and scientific instruments, a movement is taking form to ask for a change in the patent laws to compel foreign patentees to begin the manufacture in this country of the article patented in the United States within a certain time after the issuance of the patent, on pain of cancellation. Most countries have this provision in their patent laws at the present time.

Although the war is only six weeks old, a number of manufacturers are already getting ready to make, on this side of the water, articles heretofore made only in Europe. Some of these articles interest the hospital world; for instance, enameled ware has been made in Sweden and Austria. Arrangements for its manufacture in this country are now under way. This ware has been made here ever since the process was patented; indeed, the original patents were granted to the Niedringhaus Brothers, of St. Louis, on what they called at that time "granite ware." Europe appropriated the process, improved it by their slow, patient hand work, and finally took the trade as well as the reputation of the business. Since then imported enamel ware has had the call.

The makers of this ware in this country say they can make as good stuff as Sweden or Austria, but that the American trade will not pay for a better grade than they now make unless it has an import stamp on it. Now they are going to make it.

Our people are also going to make cut and etched glassware for hospitals. Heretofore Germany has made all the glass graduates, urinals, medicine glasses, milk bottles, and the like. Now our people are going to make these goods.

As going to show the trend of the time in the matter of foreign-made goods, a little incident will be of interest: A representative of a foreign house had recently contracted to supply several millions of packages of the little matches that cigar stands give away as an advertisement, with their names printed on them. These matches are of two kinds, one of wood and the other of paper. The wood ones are all made abroad, and it was this kind that the agent had sold. When the war broke out he was unable to deliver, and ruin stared him in the face, as his customers would not accept the paper matches.

Accidentally he heard about a recent arrival in this country, living in the Chicago Ghetto, who had been a matchmaker before he came over. This man was making the wooden matches in a small way and selling them to a little trade he had worked up. The agent found this man, "incorporated him," as he said, and is already making arrangements to make the wooden matches on a very large scale.

There are literally hundreds of articles heretofore made abroad that will now be "made in the United States," and the hospital people should be patriotic enough to use home-made things. Ida Tarbell, in the *Woman's Home Companion* for October, is to have a special article on the subject of patriotism of American women, expressed in their patronage of American-made goods as one of the results of the war.

Everybody should help to establish the suprem-

acy of our country. No such opportunity has ever presented itself before, and "opportunity," it is said, "knocks only once."

The Twilight Sleep.

In other pages of this issue will be found a paper by Dr. William H. W. Knipe, of the New York Post-graduate Medical School and Hospital, on the hospital aspects of the now much discussed Daemmerschlaf, or twilight sleep, of women in labor, as practiced at Freiburg, Germany.

There seems to be a pretty general concensus of opinion in this country that Kroenig and Gauss overstepped the bounds of professional propriety in advertising themselves and their work in this country as they did, using the medium of McClure's Magazine, after having failed to startle the profession in their papers before the Clinical Congress of Surgeons of North America a few weeks previous.

But it seems to the innocent bystander that, regardless of the methods employed by the German professors to attain publicity and perhaps personal notoriety, the main question is, is the practice developed by these men a good thing, and, if so, it seems we ought to master it and set it to work.

Dr. Knipe tells us he went to Freiburg a skeptic and came away a believer. Dr. Knipe's position in this country and in his profession is too well recognized for anything that he says to be ignored. Hence, when Dr. Knipe says that the twilight sleep is to come into common practice on this side of the water, we hospital people and the medical profession had better forget, even if we cannot forgive, the late unpleasant "visit to the trade" made by Kroenig and Gauss, and get to work to perfect a proper technic where the practice is to be employed.

Dr. Knipe has addressed himself in his paper, through THE MODERN HOSPITAL, to the hospital people, because, he says, only in the hospital can the facilities and a proper environment for this practice be found.

We had all better read and study this paper carefully, and, if there are medical staff men in our hospitals who are so unfortunate as not to be in touch with THE MODERN HOSPITAL, it will be advisable that their attention be called to the paper.

Kansas City's Good Fight.

The politicians in Kansas City are hard pressed in their attempts to hold that fine institution, the Kansas City General Hospital, as part of the political pork barrel. Almost the entire population of the city is up in arms against the raiders. Lately a neat little coup was attempted when the hospital board, ever ready to pull the chestnuts out of the fire for the bosses, announced a reorganization of the medical staff and the reinstatement of the leaders in the profession who had been dropped a year or so ago.

The trick has not worked, and it will be interesting to watch for the next stand the ward heelers will make in their foray. The good people of Kansas City should have courage; their fine hospital is their most valuable asset, and well worth fighting for. Drive the rascals out and keep them out.

Mr. Townsend's Paper.

In this issue will be found what is perhaps the most valuable paper ever offered to the hospital people—namely, that by Mr. F. C. Townsend, of New York, on hospital cost accounting. Judging by his intimate knowledge of hospital conditions and needs, Mr. Townsend has evidently been an acute and masterful student, as well as a practiced hospital adviser over a long period of time.

This paper is not confined in its usefulness to hospitals of any class or size, nor is it directed to trustees, administrators, and accountants alone. Every person serving in any intellectual capacity in any kind of institution for the care of the sick will find in it abundant food for profitable thought and study. Moreover, it is written in a breeziness of literary style and in a simplicity of language that raises an ordinarily dry subject into the realms of really entertaining reading.

THE MODERN HOSPITAL bespeaks for this paper careful study and attention by all its readers.

It was agreed long ago that THE MODERN HOSPITAL is to be an open forum for the expression of every angle of thought concerning hospital activities and the public health and welfare. What one reads in its columns, therefore, need not be considered as expressing an editorial policy of the journal. Indeed, the editors themselves differ on many points, and all of them often differ from opinions expressed by contributors.

A private institution to be known as the Central Institute for the Deaf has been established at St. Louis by Dr. M. A. Goldstein and others. According to an announcement just issued, the enterprise is the outcome of a concerted movement on the part of a number of progressive educators and prominent otologists representing various parts of the country, who believe that there should be a closer cooperation between the two professions in the education of the deaf. A school for the instruction of the deaf by advanced methods will be conducted, and a course will be offered for those who desire to prepare themselves for oral teaching. Dr. Goldstein was professor of otology in the St. Louis University from 1900 to 1912, and is president of the American Academy of Ophthalmology and Otolaryngology.

MEETING OF THE AMERICAN HOSPITAL ASSOCIATION.

Sixteenth Annual Conference of the Association in St. Paul, August 25-28—Important Papers Presented—Business and Social Features Pleasantly Coordinated.

The St. Paul meeting of the American Hospital Association was one of the most profitable in its history, and everybody who attended not only learned a great deal that will help them in their hospital work back home, but everybody had a good time. One of the finest things about these conventions is the personal friendships one makes, and, although we may not see each other excepting once a year, still we value these convention friendships, and perhaps the greatest good that we get out of the conventions is the personal contact with people who, by reason of the similarity of their business or their purposes, or their social inclinations, come in contact during the four days' session. Breakfasts, suppers, and dinners in the grill rooms and restaurants, where three or four men or women, or both, can sit for an hour or so together, are not the least important and profitable parts of the conventions.

There were perhaps 500 people in the convention hall when President Howell called the meeting to order on Tuesday morning, August 25, at 10 o'clock.

There was a mishap at this first public meeting. The mayor of St. Paul had agreed to deliver the address of welcome, but he failed to appear, although he had promised less than an hour before the time that the convention was to meet that he would be there.

The meeting was begun with an invocation by Reverend Dr. Edwin B. Woodruff, pastor of St. Clemens Memorial Church, of St. Paul. The next person was to have been the mayor, and, when that official failed to appear, Dr. Woodruff was asked to take his place, since the mayor had not even done the convention the courtesy to appoint someone to welcome the guests in his stead. Dr. Woodruff in a very nice speech told how important the hospitals of the country were, and how glad the city of St. Paul was to honor them through their superintendents, and he hoped that everybody would have a good time and learn much from each other. His Reverence then proceeded to trim the mayor of St. Paul for the discourtesy he had shown the association, and regretted very much that petty politics should have been allowed to intervene in the case of so great as well as pleasant a duty as that which had fallen to the mayor of St. Paul.

Dr. Woodruff began his address, "My friends, I was asked by one of the most distinguished citizens of St. Paul to express the regret—and the chagrin, let me say—that I feel and that the citizens of St. Paul feel at this moment." This had reference to the failure of the mayor to welcome the guests.

President Howell read his address as the next number of the program. The president's address was published in the September number of THE MODERN HOSPITAL.

Dr. J. W. Fowler, of Louisville, made his motion, which has come to be an annual motion at the same point in the program, that a committee of three be appointed to consider the president's address, and make recommendations in furtherance of the suggestions the address contained. Dr. Fowler also spoke of the regret of the assembled guests that the mayor of St. Paul could not be present, but he was disposed to sympathize with the mayor, and hoped that the guests would not feel that they had been slighted, because he was quite sure that no mayor of a large city could respond to all such calls made on him.

Dr. Clarke, of the Toronto General Hospital, and chairman of the Committee on Medical Organization and Medical Education was not present to read the report of his committee, and it was read by Dr. O. H. Bartine, superintendent of the Hospital for Ruptured and Crippled, New York.

Mr. Curtis, who was to have read the report on "Hospital Construction," was not present, and seems not to have intrusted his committee report to anyone who was present, and hence a report from this committee was not made. Dr. R. J. Wilson, director of the Health Department of New York City, read Dr. Charles Bolduan's paper on "Hospital Morbidity Statistics and a Practical Method of Making Them Uniform and Collecting Them for Analytical Study." There was no discussion of the paper. The morning's session closed with the extension of an invitation by Dr. Ancker for the visitors to be his guests at the City and County Hospital, St. Paul, and he assured those in attendance that there would be officers and nurses at the hospital constantly to show them through, although, he modestly said, he was afraid they had nothing very much worth seeing.

In the afternoon Miss Roberta M. West's paper on "Where Shall Nurses Be Trained?" was read by Miss Clio Hollopeter. The president stated that discussion of Miss West's paper would be postponed, as the subject-matter was very closely allied with that treated in the paper of Miss Mary

OFFICERS OF THE AMERICAN HOSPITAL ASSOCIATION FOR 1914-1915.

PRESIDENT,
DR. WILLIAM O. MANN,
Superintendent Boston Homeopathic Hospital,
Boston, Mass.

FIRST VICE-PRESIDENT,
DR. ARTHUR B. ANCKER,
Superintendent City and County Hospital,
St. Paul, Minn.

SECOND VICE-PRESIDENT,
MR. W. W. KENNEY,
Superintendent Victoria General Hospital,
Halifax, N. S.

TREASURER,
MR. ASA BACON,
Superintendent Presbyterian Hospital,
Chicago, Ill.

SECRETARY,
DR. H. A. BOYCE,
Superintendent Kingston General Hospital,
Kingston, Canada.

Time and place of next meeting, San Francisco, June 21-25, 1915.

C. Wheeler, of the Illinois Training School for Nurses, which was next on the program. Miss Metcalfe, Miss Justis, and Dr. Frank Deacon, of Chicago, discussed the papers. Dr. Deacon went somewhat into the history of a movement on the part of many hospitals of Chicago to revolt against the domination of the Illinois Board for Registration of Nurses. He felt that the board had discriminated against the small hospitals, and had all but prevented them from conducting their hospitals in the best way they could under the circumstances. He opposed the raising of training standards of nurses, and charged that hardly any hospital in Chicago was living up to the standards prescribed by the state board. Indeed, he was quite sure that the rules of the board could not be lived up to in a practical, every-day fashion.

Mr. John R. Shalladay's paper on "How the Average Community Cares for Its Sick—A Study in the Amount, Character, and Care of Sickness in Selected Urban and Rural Districts of Dutchess County, New York," gave some most interesting facts and data that had been secured in the course of the questionaire that had been sent out, and information that had been acquired during a careful canvass in Dutchess county.

Tuesday evening's session was opened with Miss Anna Louise Davis' paper on "Nursing in the Homes of People of Moderate Means." Miss Davis had an interesting story to tell. Most of us will remember the paper of Dr. Richards M. Bradley last year on somewhat the same subject. Mr. Bradley is one of the trustees of the Thomas Thomson Trust and Miss Davis is employed in connection with that work. It seems that Mr. Thomson left a large sum of money to be employed by the trustees in the best way they knew how and in which it could be made most profitable for the public. Mr. Bradley and his cotrustee, Mr. John F. Moors, decided there was a great field for the promotion of home nursing and that the work was worth doing. Miss Davis' paper told about some of it. Because the next two papers, that by Dr. Walter Morrit on "The Medical and Sociological Departments of a Coal and Iron Corporation," and that by Miss Minnie Goodnow on "Efficiency in the Care of the Patient," were along the same general lines, discussion of the three papers was postponed until all had been read, and, as interesting as the subjects were, only one person discussed them—namely, Dr. J. N. E. Brown, who had prepared a paper on the subject.

HIGHLIGHTS IN DR. MAYO'S PAPER.

The so-called diseases of childhood are unnecessary, since they can now be controlled.

Considering what has been done for the insane, the future must establish proper hospitals for the cure of drug habits, morphin, cocain, and the like.

Since the state licenses places for the destruction of man, it should also control places designed to help him. Drug stores must be licensed to prevent their abusing their opportunity by selling liquors and harmful drugs. The self-dispensing physicians should be in the same class.

Hospital reports are mostly worthless—usually given over to self-advertisement. There should be uniform reports, inspected regularly by an officer of the state. Reports should tell the truth about the physician and surgeon, as well as about the disease and the patient.

Few questionable procedures are made on the external body; they are mostly hidden and—often buried.

If hospital reports were right, and if trustees were capable and active, they would weed out incompetent staff members, since they could learn from the reports whether they were capable. The character of operations would tell whether they were necessary and whether they were successful; how many patients came back for a second operation because the first was a failure; why certain men made so many curettements; how many men did unnecessary operations for a division of fees.

Patients should be got out of bed sooner following operations, and should be sent to the country to complete convalescence. Time and opportunity of patients are wasted by keeping them in bed too long and their chances lessened. Hospitals waste time and money by prolonging patients' recovery and attempt to make up the deficits by other means.

One thousand operated patients a year, that took three weeks to get well when they should have taken one, means support for a 40-bed hospital for a whole year. Eight hundred gall bladder operations that took eight weeks instead of four means one bed for thirty-five years.

The most vital need for hospital efficiency is on the medical and surgical side.

Unfortunately, Mr. Meyer J. Sturm's most interesting lantern slide paper on "Artificial Lighting of Hospitals" was postponed until too late in the evening to be well attended and too late for those in attendance to be especially appreciative. Mr. Sturm's paper was somewhat long, and some excellent lantern slide lighting pictures were shown. Mr. O. H. Bartine, of New York, discussed Mr. Sturm's paper by the presentation of a paper of his own on the same subject. Mr. Bartine's discussion was so signal a contribution to the art of lighting that THE MODERN HOSPITAL has asked him to finish it as a separate paper, and it will be published in an early issue. The paper was also discussed by Mr. Stevens, of Boston.

Wednesday morning the convention hall was packed to the doors, everybody being anxious to listen to the paper by Dr. Charles H. Mayo, which appears in another column of this issue of THE MODERN HOSPITAL. Dr. Richard O. Beard, of the medical faculty of the University of Minnesota, and Dr. Hornsby, of Chicago, discussed Dr. Mayo's paper. The next paper of Wednesday morning's session was that by Dr. Joseph B. Howland, of Massachusetts, on "Hospital Records." Dr. Howland's paper is published in this number of THE MODERN HOSPITAL. It was discussed at the meeting by Mr. Shalladay; Mr. Chapman, of the St. Louis City Hospital, and Captain E. F. Leiper, of Philadelphia.

Dr. George O'Hanlon, of Bellevue, read a most interesting paper on "The Responsibilities of the Municipality to the Expectant Mother of the Middle Class." Dr. O'Hanlon, in his paper, told what Bellevue has been trying to do in the matter of teaching midwives. At the end of his paper, Dr. Babcock asked Dr. O'Hanlon if he had had the support of the medical profession in New York in the furtherance of his project to teach midwives their business, to which Dr. O'Hanlon replied: "I cannot say that we had the support; we had the cooperation of a number of physicians and the business staff in this course for midwives, and instruction to the pupils from the visiting obstetricians and physicians of Bellevue Hospital."

Dr. Walsh's paper on "The Hospital Superintendent—Past, Present, and Future," brought out discussions by Dr. Warner and Dr. Howland.

The section on small hospitals, Wednesday morning, presided over by Miss Rogers, of St. Louis, proved to be

one of the most interesting sessions of the whole meeting. Reverend Dr. A. E. Clement, commissioner of Galloway Memorial Hospital, Nashville, opened the session with a paper on "Raising Hospital Funds—Its Educative Value." Dr. William T. Graham's paper came next, on "The Private Hospital Enterprise as a Public Interest." The paper by Mr. J. B. Franklin, superintendent of the Baptist Memorial Hospital, Dallas, Tex., was not read, as Mr. Franklin was not at the meeting.

The discussion on the two papers was opened by Miss Jordan, of Aurora, who told what she had been doing for the Aurora hospital in the matter of publicity, about what she had given to the newspapers in the way of publicity, and how much it had helped her. She told also about Tag Day that she had instituted. She gave an interesting story of her experiences with her medical staff, and how she had got along with the individual members. She brought a laugh by saying she gave them an annual dinner as one way to keep men in good humor. "We had such an excellent dinner last year that men who had not been speaking for years were having the most confidential conferences before we were through," she said. She didn't say what special number of the menu had brought about this pleasing effect, so the prescription cannot be applied by others unless Miss Jordan will tell us more about that dinner. She told about a "whirlwind campaign" that had cost $5,000 for dinners and another $5,000 for advertising. Miss Jordan said she had a deficit last year of only $5,000 on an 85-bed hospital. Miss Jordan's paper brought out a great number of questions bearing on her experiences at Aurora, and the interchange of experiences was fast and furious for an hour. The paper was also discussed by Dr. Simon Cox, of New York; Miss Hayden, Miss Burns, Miss Garrett, Mr. Ritchie, and Mr. Dikman.

DR. WILLIAM O. MANN, PRESIDENT.
Superintendent Massachusetts Homeopathic Hospital.

Dr. Mann, of Boston, newly elected president, is a graduate of Boston University School of Medicine, 1892; was assistant physician of the State Hospital, Westboro, Mass., 1892-1895; assistant superintendent of the State Hospital, Fergus Falls, Minn., 1895-1899; superintendent of the Massachusetts Homeopathic Hospital since 1899.

Mr. English, for the Thompson Foundation of Boston, made the following announcement at the end of the session: "For more than two years the Thompson Foundation in Boston has been investigating the administrative problem of the small hospital—I mean running 50 beds or under. They will be glad to cooperate with the superintendents of your hospitals of that size to help them solve their problems, and in return the Foundation expects cooperation in the establishment of a uniform system, so that we can judge the efficiency with which our own hospitals are operated as well as the particular hospitals adopting the system. I will be glad to talk with anybody while I am here. I shall be here until the close of the convention, and anybody interested will get an immediate reply by addressing the Thomas Thompson Foundation, 60 State street, Boston. There is no expense connected with it. For the first year all the hospitals in the New England district will be supervised personally and helped in installing the system. We are very glad to help anybody. We have found it very successful in the hospitals where it has been adopted. We now have four hospitals using the system, and it has proven successful, having increased the efficiency in every hospital where it has been used."

The afternoon session of small hospitals on Wednesday was presided over by Dr. W. G. Neally, of Brooklyn, in the absence of Mr. Webster, of Montreal. The first paper on the program was that by Reverend Irving B. Johnson, trustee of St. Barnabas Hospital, Minneapolis, who spoke on "The Experiment of a General Hospital Without a Staff." Mr. Johnson told what efficient work his hospital had been doing without a medical staff, and in the course of the discussion it developed that for six months he had been out of the city and was not conversant with what had been done, and was obliged to call on the superintendent, Miss Hartry, to answer a very obvious question. It is said by those who heard Mr. Johnson's paper read that it was a most amazing document, and enunciated a number of facts about the administration of hospitals that were new to the audience, especially facts concerning the arrangement for the care of charity cases. Mr. Johnson said St. Barnabas had a visiting nurse who had the right to call in any outside physician whom she could interest in the case, and that he thereupon became the physician of the patient. Mr. Johnson did not know whether the physicians of Minneapolis responded on such occasions with that alacrity with which they are accustomed to respond when they are members of the staff of the hospital. It developed that in the old arrangement the staff changed each month, and that the charity patients came under the care of the particular physician who happened to be on service during that month. It developed also in the course of the discussion that the private nurse, who seems to have unlimited powers concerning charity patients, is paid by a private party. In the course of the discussion the question of medical ethics as propounded by county medical societies came up at the instance of Dr. W. H. Walsh, of Philadelphia, and Mr. Johnson said, "I don't think your county medical society amounts to a row of shucks when it comes to the ethics of the profession." He said further, "I don't think, on the other hand, that the doctors have any right

DR. ARTHUR B. ANCKER, FIRST VICE-PRESIDENT.
Superintendent St. Paul City and County Hospital, St. Paul, Minn.

Dr. Ancker, of St. Paul, newly elected first vice-president, has been for more than thirty years superintendent of the St. Paul City and County Hospital. Beginning in an old dwelling house, he has seen his hospital grow until it is now one of the finest hospitals of any class in this country, containing over 600 beds.

MR. W. W. KENNEY, SECOND VICE-PRESIDENT.
Superintendent Victoria General Hospital, Halifax, N. S.

Mr. Kenney, of Halifax, Nova Scotia, newly elected second vice-president, was born, reared, and educated in Nova Scotia. After some business successes, was invited by the Government of Nova Scotia, sixteen years ago, to accept his present position of superintendent of the Victoria General Hospital of Halifax.

to ask the layman or staff superintendent to assume that responsibility. I think that question is up to the profession, and I think it is time that the physicians worked up a scheme of purifying themselves and not leaving it to lay superintendents to pull the chestnuts out of the fire." In answer to a question, Mr. Johnson said the charity committee of the hospital had the exclusive decision as to whether a charity patient should be admitted to the hospital or not, and the rule was that physicians might suggest the admission of such patient.

Dr. Graham, in discussion, stated that he did not see how a hospital could avoid responsibility for the work done within its walls, and he did not see how proper work could be maintained if any physician from anywhere could come in and do any kind of work he pleased; and he did not see who was to judge of the propriety of the physicians' work where there was a lay board and a lay superintendent and no medical staff.

Mr. Olson made the report of the committee appointed last year to consider the value of certain recommendations

DR. H. A. BOYCE, REELECTED SECRETARY.
Superintendent Kingston General Hospital, Kingston, Ont.

MR. ASA BACON, REELECTED TREASURER.
Superintendent Presbyterian Hospital, Chicago, Ill.

Members and guests of the American Hospital Association

made in Mr. Heyworth's paper on "What the American Hospital Association Can Do for the Hospitals of the Country."

Announcement was made by the chairman that at the close of the session a meeting of the superintendents from Ohio would be held in an adjoining room for the purpose of creating a nucleus for an Ohio State Hospital Association.

Miss Dale's paper on "The Hospital Family—Cooperation in Domestic Management" was published in the September number of THE MODERN HOSPITAL. There was a fine discussion of the paper by Mr. Pliny O. Clark, Mr. Olson, Dr. Babcock, and Miss Aiken. Mr. Clark spoke of a "round table" held in the Ohio Valley General Hospital at Wheeling, in which the engineer, the housekeeper, the principal of the school and her assistant, the dietitian, the pharmacist, the steward, and all the head nurses participated. Mr. Clark was asked whether there were social features connected with these round tables. He said there were not, but that they were held immediately after luncheon, once a week. Dr. Babcock, in the discussion, told of the new Employees' Home at Grace Hospital, Detroit, with separate entrances for different classes of employees, and with features for the entertainment of the people, such as card and pool rooms for the men and reading rooms and recreation places for the women. The matron at Grace Hospital thought the efficiency of the force had been greatly increased since some attention was being paid

A view in the noncommercial exhibit hall.

who visited the St. Paul City and County Hospital.

to the welfare of the people, and she thought the class of people had greatly improved. In answer to a question, Dr. Babcock said there were reception rooms in the maids' home in which they could receive their friends at any time, and that the girls were greatly pleased with these social opportunities and took advantage of them. There were some pretty rigid rules about the hours of the people, but they were liberal enough so that all reasonable demands of employees could be met; as, for instance, the women must be in the house at 10 o'clock in the evening, excepting for two evenings in the week, on which they were permitted to ask for late permits up to 12 o'clock.

In the large hospital section, on Wednesday afternoon, Dr. J. W. Fowler's paper came first, on "Scientific, Economical, and Humane Conduct of Municipal General Hospitals in the Southern States." Dr. Fowler's paper was published in the September number of THE MODERN HOSPITAL. Dr. Wilkins read a paper discussion by Dr. Wayne Smith on Dr. Fowler's paper, and Miss Hollopeter did not think the negroes were so easy to take care of as Dr. Fowler had found them. She found they were destructive, hard to teach and hard to handle, and that they created quite a problem in any hospital in which there were any considerable number of them.

Miss Holloway's paper on "Hospital Housekeeping" will be published in the November number of THE MODERN HOSPITAL. In his introduction of Miss Holloway, the president stated that he had heard preceding programs criticised for the reason that they contained no practical paper on housekeeping, and that he had determined when he was elected president that his program should not be criticised in that way; he had therefore gone to Pratt Institute, in

A view in the noncommercial exhibit hall.

Brooklyn, and secured Miss Holloway's consent to come and read a paper. The paper was discussed by Dr. Howland, Dr. Mann, and Dr. Walter S. Goodale, of Buffalo.

Dr. Pratt's paper on "Hospital Ambulance Service" was next read, and brought out a good deal of discussion, notably by Dr. Mann, who gave some figures of gasoline ambulance costs. He said that at his own institution one of the gasoline machines had run 25,000 miles in the past eighteen months and had cost for gasoline, tires, repairs, and painting at the rate of 10 cents per mile. He thought that was higher than an electric automobile would have cost, and he thought perhaps the electric automobile would do very well for cities like New York or Detroit, where the calls were short, but that in his institution, where the calls were sometimes as far away as twenty-five or thirty miles, the electric machine was out of the question.

Dr. Walter S. Goodale told about some new gasoline ambulances used by the health department of the city of Buffalo, which were equipped with a series of five metal linings, any one of which could be fitted into the inside of the machine. The patient rides in this lining, which hugs the inside of the ambulance body everywhere, and he does not come in contact with the ambulance body at all. One of these linings is used for diphtheria, another for scarlet fever, measles, and so on. Dr. R. J. Wilson, of the New York Health Department, thought that there was a special use for every variety of ambulance in connection with the hospital service—horse, gasoline, and electricity. He said New York intended to put in Dr. Goodale's patent lining. Dr. Wilson, in answer to a question, said he liked the electric car better than others for Manhattan Island; for all the outlying boroughs, where there were many miles of unpaved streets, he liked the gasoline motor best, and for sections where there is a lot of sand and heavy going there was nothing that could take the place of the horse ambulance.

The Thursday evening session of the round table connected with small hospitals, and presided over by Mr. Olson, turned out to be one of the most interesting sessions of the meeting. There were a great number of questions asked and much lively discussion participated in by more than twenty of those in attendance.

[Comment on the meeting will be concluded in the November issue.]

Excellent Staff Provision.

The Physicians' and Surgeons' Hospital is the name of a new institution, ground for which was broken in New Haven, Conn., on September 1. The hospital will be for the accommodation of pay patients only, the charge for a bed being from $10 per week in the wards to $75 per week in the private rooms. The attending staff will be organized on a novel plan, as no physician or surgeon will be eligible for election to it who has not demonstrated, by publication in the medical press or by some other actual work done, that he is capable of filling a staff position in an efficient manner. If he becomes a member of the staff, he has to write an article for publication in the medical press at least once a year, describing some work which he has personally done or some discovery which he has made. Failure to do this automatically terminates his membership on the staff. It is expected that the hospital will be ready for the reception of patients in about one year.

The New York City farm for inebriates at Warwick is to be converted into a sanatorium for drug users. Patients of this class in the metropolis appear to be on the increase, over 1,000 of them having been sent to the various city institutions since July 1.

JOHNS HOPKINS TO CELEBRATE.

Osler, Welch, Hurd, Smith, and Others to Help Celebrate Natal Day of Hospital and School.

Johns Hopkins Hospital and the Medical School are to have a four-day festival on October 5-8 in celebration of the quarter-centennial anniversary of the opening of the hospital and the twenty-first anniversary of the opening of the medical school. The program is as follows:

PROGRAM FOR THE CELEBRATION OF THE TWENTY-FIFTH ANNIVERSARY OF THE OPENING OF THE JOHNS HOPKINS HOSPITAL.

MONDAY, October 5.	TUESDAY, October 6.	WEDNESDAY, October 7.	THURSDAY, October 8.
Nurses' Day	9:30-12 Medicine (Medical Amphitheater) Psychiatry 10-1 Gynecology (Surgical Amphitheater) 12 Clinic Sir Wm. Osler	9:30-1 Surgery (Surgical Amphitheater) 9-11 Medical Visits 11-1 Medical Laboratories	Pathology (Medical Amphitheater) Obstetrics (Surgical Lecture Room) 10-12 Urological Surgery (Surgical Amphitheater)
	Lunch	Lunch	Lunch
Opening Meeting (The Lyric) Addresses: Dr. W. H. Welch presiding Sir Wm. Osler Dr. H. M. Hurd Miss M. A. Nutting 5 Garden Party Johns Hopkins Hospital Lawn	2:30 Pediatric Wards Dr. Howland 3:30 Dedication Hewetson Medallion 4:30 Herter Lecture 5 Ladies' Garden Party	3:30 Dedication of the J. B. Brady Urological Clinic Dr. W. H. Smith presiding Pres. F. J. Goodnow Dr. H. H. Young and other speakers	4:30 Herter Lecture
Dinners Johns Hopkins Hospital Alumni Nurses	Dinner Alumni of Medical School	Dinner to Mr. J. B. Brady, donor of the new Urological Clinic Class Dinners	Class Dinners

Report of the British Insurance Commission.

The second annual report of the British National Insurance Commission, recently issued, gives some interesting figures showing the magnitude of the personnel embraced under the law, and the gradual increase in the number of "panel doctors," notwithstanding the uncompromising attitude of the medical profession, as a whole, regarding this form of service.

There were on January 15, 1913, 13,996 medical men on the panel; April 14, 15,659; October 13, 15,870; May 31, 1914, 16,059.

The approved societies are stated to have 10,533,220 members, of whom the "friendly societies" contributed 4,856,584. Of this total, the industrial insurance companies accounted for 3,759,396 and the trades unions for 1,154,484; collecting societies contributed 663,659 members, and employers' provident funds had 99,097 insured persons on their lists.

The commission reports that, so far as it can judge, the medical profession is living up to the confidence reposed in it by Parliament in leaving the members certain discretionary powers in the matter of attendance and fees.

CURRENT HOSPITAL LITERATURE

Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Ship School Sanatorium for Children Predisposed to Tuberculosis (Una nave scuola sanatorio per fanciulli predisposti). Tubercolosi, Milano, 1914, VI, No. 4.

The commission in charge of the summer colonies for poor school children in Rome who are predisposed to tuberculosis is about to establish a permanent ship sanatorium for these children. The ship is intended to serve as a school and as a sanatorium. A number of prominent physicians have been consulted on this matter, and the answers have been favorable throughout. A ship furnished by the Government will soon be fitted out for this purpose. A considerable sum has already been collected to cover the expenses.

Construction and Managing Costs of Municipal Hospitals (Bau und Betriebskosten kommunaler Krankenanstalten). Bockendahl. Heilanstalt, Leipzig, 1914, IX, No. 12.

The present tendency to reduce the construction costs of hospitals is justified. But the increased expenses in the construction of hospitals are not only due to a lavish use of money in fitting out such institutions, but are partly justified by the increased demands of the patients regarding comfort. Besides, the hospital has ceased being merely a place favoring a cure, and is now itself an important factor in the cure of disease. The costs of construction can be reduced only by establishing less expensive divisions for patients who are convalescing from acute diseases, or who are suffering from diseases which do not require the expensive curative apparatuses of a modern hospital. The managing expenses can be reduced by demanding higher rates from the patient or from the sickness insurance associations. Low rates in municipal hospitals should, in the interest of the community and that of the physicians, not be permitted.

Combating Street Dust in the Neighborhood of Hospitals (Die Bekämpfung des Strassenstaubes im Bereiche der Krankenhäuser). Am Ende Heilanstalt, Leipzig, 1914, IX, No. 13.

Dust is harmful to healthy persons, but in a much higher degree to weak and sick people. It is therefore of great importance that courts, roads, streets, and public places near hospitals be kept free from dust as far as it is possible to do so. It is the duty of the hospital authorities to prevent, as much as possible, the dust from penetrating into the sick rooms. In the new city hospital at Dresden all pipes and tubings are hidden in the walls to prevent dust from settling on them. Many methods have been recommended to prevent dust accumulations on roads and streets. Coal tar is an excellent material, but it is expensive and not durable. A new preparation has lately been put on the market which is superior to anything heretofore known in the way of dust prevention. This new preparation is called "apokonin." It has been extensively used in Germany and given general satisfaction. It is odorless and not soluble in water. It produces such a close cohesion between the dust or earthly particles that a surface treated with apokonin is completely watertight. This preparation is especially recommended for courtyards, roads, streets, and public places near large hospitals.

The King Humbert Dispensary in Rome (Il dispensario Re Umberto in Roma). Marchiafava. Tubercolosi, Milano, 1914, VI, No. 6.

The King Humbert Dispensary for tuberculous patients was founded by the widow of the late king, and is the first institution of its kind in Rome. It is located on the southern slope of the Jamiculus Hill, and is surrounded by beautiful gardens and parks. Great attention is paid to the maintenance of hygienic principles. Each patient is provided with a cuspidor, and no one is permitted to expectorate on the floors, walks, gardens, etc. On the walls of the rooms the principles of hygiene are written in large letters. The hospital is visited daily by a number of the most prominent physicians of Rome. The dispensary stands in close connection with other charitable institutions for the tuberculous. Patients in the advanced stage of tuberculosis are sent to the general hospital, those with incipient tuberculosis are transferred to sanatoriums, especially to the one at Leghorn, and children of tuberculous patients are placed in the Regina Elena colony or in summer colonies on the sea coast or in the mountains. To combat tuberculosis efficiently, the author holds that an educational campaign concerning tuberculosis is of highest importance. The people should know the cause and prevention of tuberculosis; they should know that the sputum carries the contagium, and that the sunlight kills the germs.

Simple but Important Things Often Badly Done. L. W Littig. Jour. Iowa Med. Soc., Washington, 1914, IV, 46.

The writer calls attention to errors often found in hospitals. That instruments should be boiled, not steamed, in a carbonate of soda solution. Gloves should be laid flat and straight, with the cuffs turned back, and sterilized ten to fifteen minutes in a pressure sterilizer at fifteen pounds; if boiled, to be filled with water, wrapped in a towel, and completely submerged; if not steam sterilized, they should be filled with water and completely submerged; when gloves are mended, the patch should always be placed on the inside, indicated by the number and the hem. Rubber gloves being made over a form, the hem and number are put on last, and consequently the band and number indicate the outside; the patch of the mended glove is therefore to correspond to the hem and number of the glove. If gloves are put on dry, both hand and inside of the glove should be well powdered, and the glove put on with hand held upward to prevent excess of powder collecting at finger tips. He claims fifteen to twenty minutes is too short a time to sterilize a large amount of material. He uses the Bramhall Deane pressure sterilizer at fifteen pounds pressure for two hours and one hour to dry. In a hospital nothing less than one hour should be accepted. The care and preparation of the hands, as well as the patient, are considered. He advocates careful observance of the respiration to be noted by the nurse on record sheet. He believes in having operations in a hospital bulletined, that every member of the hospital staff or physician who has the privilege of the hospital should

be given the opportunity of being present. The success of hospitals in which such a custom has prevailed is proof of the general consent of its patients. By such practice in our hospitals the outcome will be better surgeons and better surgery.

The Late Official Regulations Concerning Hospital Construction and the Question of Building Expenses (Die neueren amtlichen Vorschriften fur Krankenhausbauen und die Baukostenfrage). Winterstein. Deutsche med. Wchnschr. Berlin, 1914, XL, No. 17.

In 1912 the Prussian ministry published new regulations concerning hospital construction. These regulations make very high demands regarding hygienic principles, and the author thinks that they are to a great extent responsible for the increased costs of the new hospitals. The regulations require building grounds of 100 square meters per bed, but Winterstein thinks that 50 square meters is amply sufficient for smaller hospitals. Larger institutions require more space on account of the numerous buildings, streets, etc. Thus the Virchow Hospital has 128 square meters per bed, but, if the one-story buildings were raised to two stories, the space per bed would be reduced to 86 square meters, which would still be ample space; 60 square meters is therefore all sufficient. The economy buildings could be placed around a closed court. The management would thus be facilitated and building expenses would be reduced. But the regulations do not permit such an arrangement. It is likewise forbidden to place sick rooms on the north side of a building, which is a very onerous rule, especially for large hospitals. The requirements concerning stairways are also excessive. Much money could be saved here, especially with regard to those stairways which are not used by the patients.

The Question of Dietary Reform in Hospitals (Zur Frage der Diätreform in Krankenhäusern). H. Strauss. Zeitschr, f. phys. u. diät. Therap., Leipzig, 1914, XVIII, No. 6.

The treatment of diseases by diet has made great progress in the last twenty or thirty years, and the hospitals were compelled to keep step with the new discoveries. But in most hospitals the usual diet was only changed for a few diseases which require a special diet. If we examine the diet lists of many hospitals, we find that there is not enough diversity of foods, and there is a considerable lack of suitable vegetables and finer kinds of meats. In many hospitals cream, fruit, stewed fruits, etc., are not furnished at all, or only in insufficient quantities. As a remedy for these unsatisfactory conditions, many large hospitals have recently established so-called diet kitchens in connection with the central kitchen. This causes, of course, greater expenses, and a suitable personnel for such diet kitchens is not easily found, but the hospitals are more and more recognizing the good results of dietary therapeutics and will readily grant the necessary means for these reforms. But for smaller hospitals it is not at all necessary to establish special diet kitchens, as it is only a question of management and organization. The following changes in the present arrangement seem to be necessary: (1) a diet list should be made in advance for each week and for each day in the week, by which the assistant physicians fix the daily diet for each patient; (2) the finer kinds of meats, suitable vegetables, and all such foods which are indicated for weak digestive organs, ought to predominate; (3) in certain diseases—as, for instance, in ulcer of the stomach—the physician should be allowed to select any food he deems necessary. What we need, however, are physicians who have a full knowledge of dietetics. Many assistant physicians are wanting in this respect, and the physicians-in-chief have not the time to watch the dietary details of each patient. Our young physicians have indeed greatly improved in this respect, but the knowledge of the calorie contents, of the various components of foods, the knowledge of the physiology and pathology of nutrition, is here not sufficient; a certain elementary knowledge of the technic respectively of the physics and chemistry of the kitchen is absolutely necessary. The nurses, too, must be better versed in dietetic questions. America is far ahead of us in this respect. In the hospital of the Post-graduate School in New York I found that the nurses are not only able to prepare the most complicated foods, but they can fill all the demands of the physician with regard to calories, albumen, fat, and carbohydrate contents of the foods. At the Presbyterian Hospital in Chicago the nurses receive in six to eight weeks full instructions regarding food materials and their importance in nutrition. They are also expected to visit markets, bakeries, and factories of food materials.

La maison de santé protestante de Bordeaux (The Protestant Hospital at Bordeaux). Jour. de méd. de Bordeaux, 1914, LXXXV, No. 18.

The Protestant Hospital at Bordeaux was founded in 1863. A number of additions were made to the old building, which was used as a hospital. In 1896 an entirely new structure was erected in place of the old one. This hospital receives poor patients of the Protestant persuasion of both sexes without pay. Patients with means have to pay 3 francs per day (75 cents), but are placed in separate rooms. On the first floor the hospital carries on a free dispensary service in thirteen specialties. In 1913 no less than 11,295 patients were treated at this dispensary. The hospital has 77 beds in all; 15,730 patients have been treated at this hospital since its foundation to the present time. The surgical division has a fine operating room, receiving its light from above and from one side. The lying-in division is in the second story of the main building. It was opened in 1903, and 147 women of the poorer classes have been delivered since that time. Besides the hospital work, this institution sends out visiting nurses, who visit and attend poor patients at their homes. During 1913 no less than 495 patients were cared for in this manner. The hospital also carries on a nurses' school, and after a course of two years a nurse receives a diploma. The institution is supported in various ways; the city pays an annual contribution, but the greater portion of the money is obtained from charitable people.

The relief ship equipped by the American Red Cross left New York Harbor September 12 with an army of nurses and surgeons for European ports. Major Robert Hugh Patterson was in command and Miss Helen Scott Hay directing head of the nurses. Among the supplies carried by the ship were 400,000 pounds of cotton, absorbent and nonabsorbent, 300,000 yards of gauze, 15,000 pounds of bandages, and 50,000 yards of starched gauze. There were eight complete surgical equipments and thousands of gallons of iodine and cases of ether. Each nurse signed a promise to stay six months. If any returns sooner, she must pay her own expenses. In the event that the war lasts longer than six months, all who desire will be returned and others sent in their places. Units will be sent to all of the nations at war.

Miss Von der Au, superintendent of the Americus (Ga.) Hospital, has resigned and returned to Atlanta, her home. The local press speaks highly of Miss Von der Au's work in the Americus Hospital, and says that she leaves the institution much to the regret of the association. Miss Breeden, a nurse in the hospital, has assumed charge.

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Sanatorium Budget of Fun.

"The man worth while is the one who greets you with a smile when the T. B.'s begin to sting." This is the motto, or slogan, of the *Sunflower Magazine*, which makes its appearance "every little while" at the Cincinnati Tuberculosis Sanatorium, known also as the "Branch Hospital." The magazine is the work of one of the patients at the institution, and shows evidences of considerable literary talent. It is a four-page affair, page size 8½x11, with letter-press heading, the rest being printed on a mimeograph. The matter which fills its columns is mainly of a character calculated to dispel the blues. In addition to "Hospital Chatter" and miscellaneous contributions, a department of "Free Medical Advice" is maintained. Here are a few paragraphs culled from a copy recently received by the news editor of THE MODERN HOSPITAL:

"Miss Glass is not very transparent."

"They say the nurses are sore because the chickens had their home built first."

"Some one asked 'Cigarets' what was the matter with him. He answered, 'Two Buckle Osis.'"

"Dan Whalen dropped into a mission on Third street. Some one got up and asked, 'Where is my wandering boy tonight?' Dan replied, 'I think he is in the Branch Hospital.'"

"Downey says that one evening when he was up in Iceland he went to see his best girl, an Eskimo. It happened to be the season when the night lasted six months. Downey had a lot to tell his girl and kept no account of the time. During one of his impassioned perorations the girl's dad appeared on the scene and wanted to know if the young swain was ever going to depart. Downey then looked at his watch and was astonished to discover that he had been there 720 hours."

Under "Free Medical Advice" it is stated that Dr. Mud will answer all questions pertaining to the health of the patient, but will not interpret dreams. These are some of the queries and answers:

"Dear Doctor: How can I keep my toes from sleeping?" Answer: "Don't let them turn in."

"Dear Doctor: Am getting childish, though only forty—Miss Demeanor." Answer: "There is no cure; you will have to let it run its course."

It is said that the patients look for each number of the magazine with eagerness and enjoy it heartily.

Epidemic Gonorrhea in Hospitals.

In view of the seriousness of this problem, the department of health in New York City inaugurated several years ago bacteriological and clinical investigations to determine, as far as possible, the prevalence of gonorrhea and to inaugurate measures to prevent its spread through the wards. The following routine is now observed in the hospitals of the department of health:

Material for bacteriological examinations is taken from every female patient on admission to the hospital, and sent to the research laboratory of the department of health, from which a written report is made to the resident physician on the following day. Patients without clinical evidence of the disease are immediately sent to "clean" wards, others to "observation" wards to await the result of the laboratory examination. If the latter shows the undoubted presence of the disease, the patients are immediately transferred to special wards for infected cases, to remain during their entire stay in the hospital. Observation cases are frequently found to have the disease in the latent form, and for this reason they are also kept throughout their stay in the wards separate from the undoubted cases and also from the uninfected cases. Those cases in which a latent form of the disease lights up are immediately transferred to the infected wards, as are also those who develop the disease in the hospital.

The Two Cots.[1]

BY C. CHESTON.

Mothers! whom closer ties forbid to roam
In search of sorrows ye would fain assuage,
Whose love finds fitting duties nearer home,
Think on the war with grief that women wage!
And, as your happy children round your knee
(The sweetest picture to your loving eye)
Laugh at a fairy tale in happy glee,
Unconscious of their fellows' misery;
Teach their young hearts to feel another's grief,
Show them the purest joy they e'er can know
Is found in giving comfort and relief
To those condemned to poverty and woe,
Tell them the rose that blooms upon the hedge
Is cousin to the cultured hot-house flower;
Want is no crime, sickness no sacrilege,
That we should blame the paupers of the hour.
One power made us all, each nurtures some
In peaceful indolence to spend their time;
Want stifles others, till in time they come
From youth neglected to an age of crime.
Each waif that struggles on its sordid path
Hath yet a spark of nobleness within;
Seize it, and turn it from the coming wrath
That waits upon a life of shame and sin.
And for the sick ones: help the skillful band
Of girls who labor in our Shadwell wards;
Their hero lives your sympathy commands;
The work their strength is spent in is the Lord's.

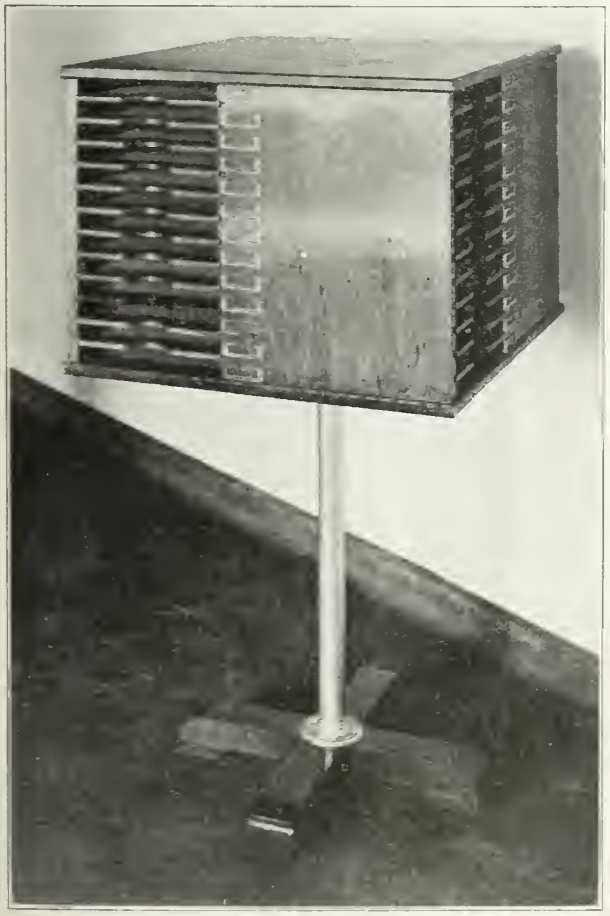
[1]Abstract from an old number of "Voluntaries for an East London Hospital." Selected by F. B. Martin.

HOME-MADE HOSPITAL APPLIANCES

A Revolving Chart Rack.

DESIGNED BY EDWARD F. STEVENS, HOSPITAL ARCHITECT, BOSTON, FOR THE OHIO VALLEY GENERAL HOSPITAL, WHEELING, WEST VIRGINIA.

This chart rack is a very simple affair, as may be seen from the accompanying picture. It is made to hold fifty-two charts. It is 24x24 inches across the top, the space between each shelf is 1⅛ inches, and the height over all is 46 inches. The wood used in the construction is white oak, finished natural color. The standard is a 2-inch pipe, 42 inches long, with pointed top, on which a steel plate rests, thereby providing a very free-working bearing. The



Revolving chart rack.

bottom of this standard is made fast to the legs or cross pieces by a simple flange. The legs are fitted with ball-bearing casters. Card holders are provided for the name of patient, service, and room or bed number.

The advantage of the revolving chart rack is that many charts may be kept in a very small space, and handled in a very convenient manner by one sitting at the desk. The top of the chart rack may also be used as a writing desk by one standing. The whole is so light that it may be easily moved about by the maid when cleaning.

Decorative Quiet Zone Sign.

In nearly all communities the law provides for "quiet zones" within a certain distance of hospitals. The signs indicating these quiet zones are not always artistic or decorative. Mr. Bacon, of the Presbyterian Hospital, Chicago, has devised a scheme that will relieve the ugliness of a sign in the neighborhood of a hospital. The illustration shows it.

Bacon's decorative "quiet zone" sign.

The sign itself is not pretty, but Mr. Bacon's idea is to set a box of growing flowers behind it, with draping vines as a part of its contents. Where the sign faces both ways, the flowers can be set in a box between two signs. Mr. Bacon hopes that next year he can obtain a much more luxurious growth of his potted things, and that the effect will be attractive.

Feeding War Prisoners.

The British War Office has published the daily ration that it expects to give to prisoners of war, as follows: Bread, 1½ pounds, or biscuits, 1 pound; fresh of frozen meat, 8 ounces, or preserved meat, half ration; fresh vegetables, 8 ounces; butter or margarine, 1 ounce; condensed milk, 1-20th of 1-pound tin; tea, ½ ounce, or coffee, 1 ounce; sugar, 2 ounces; salt, ½ ounce.

Substantial improvements are being made at the Florida East Coast Railway Hospital at St. Augustine, Fla. The operating room and sun parlor section has been cut completely loose from the main building and moved east twenty-four feet. In this space, and connecting the removed section with the main structure, will be erected a three-story addition corresponding in architecture to the front of the existing building. The first floor of this addition will be utilized to provide more consulting room and waiting room space. On this floor will be also a special x-ray room. The second floor will be arranged for bed rooms and linen closets. The third floor will be made into a large recreation hall and lecture hall for the nurses. Opening on this room will be a spacious veranda out over the roof of the operating room. Dr. Murray W. Seagears is the chief surgeon of this hospital.

NEW EQUIPMENT

Conversion of Mattress Into Litter for Use in Case of Fire.

FREDERIC A. WASHBURN, ADMINISTRATOR MASSACHUSETTS GENERAL HOSPITAL.

A simple expedient has been adopted at the Massachusetts General Hospital for converting into a stretcher the mattress upon which the patient lies. The object is to provide a method of emptying the ward in case of fire as expeditiously as possible and with little inconvenience to the bed patient. The mattress is provided with four loops on each side, as shown in Figs. 1 and 2. Five pairs of poles painted red are placed outside of each twenty-bed ward, and the following sign hung near them:

> To move patients from the ward, carry two poles to bed and convert mattress into stretcher by thrusting poles through four loops on either side of mattress.

Fig. 1. Shows loops for poles.

The writer has permitted himself to be carried on a stretcher down two flights of hospital stairs, and knows that the experience is not an uncomfortable one. There is still further advantage in that the patient is left upon the mattress and is comfortable wherever placed. The poles are withdrawn by the bearers, who make another trip to the ward to further help in removing patients.

Fig. 2. Method of carrying patient.

Note the collar at the junction of the handle with the pole. The end loop goes over this collar to prevent the mattress from slipping when coming down stairs. Our mattresses are 74 inches long by 36 inches wide and the poles are 8 feet long.

This device may be used in transferring the patients from one ward to another when it is not deemed desirable to move the beds.

The Perfect Nurse—A Recipe.

Almost everyone thinks he can paint the picture of the ideal nurse. Hospital people and doctors think they have a patent on the recipe. Now comes along the *Woman's Home Companion* for October with the following picture of the perfect nurse:

"Among the things a nurse must *not* be, a few stand out prominently. She must not be untruthful in any degree whatsoever. She may sometimes be obliged to practice evasion with patients who are physically or mentally unfit to know the facts, but lying—never. She must not be 'high strung' nor nervous.

"The higher education is not essential in becoming a trained nurse, but most training schools require the applicants to have had a high-school education, though exceptions are sometimes made to this rule. While the higher branches of education are not necessary, they are always desirable, and a knowledge of one or more foreign languages is a distinct asset. To enter a training school, a girl must have good health; she must have poise, and enough tact to be able to cultivate more of it; and she must have an abundance of tolerance.

"She must be personally neat. In hospitals you learn that cleanliness comes before all else, but close after comes order.

"If a young woman has a knowledge of cooking, so much more easily will she pass her examination in dietetics; if she knows something of marketing and shopping, she will be more likely to display a disposition to economy in the handling of food and supplies; and if she is a good housekeeper, so much neater and better ordered will be her ward."

NEW INSTRUMENTS and APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

An Inexpensive Sacral Support and Hip and Leg Extension Apparatus.

DESIGNED BY DR. WALTER G. STEARN, CLEVELAND.

Few hospitals are provided with suitable extension apparatus or sacral supports for operation on the hip and thigh or for application of hip plaster casts and spicas. The comparatively high cost of special orthopedic tables or extension apparatus is the usual reason for this shortcoming.

The apparatus illustrated here has been designed so that it can be constructed by any competent steam engineer or blacksmith from parts which can be purchased from a machinist supply house. The only connections are the special table clamps made from the doctor's own patterns, but even here in an emergency small blacksmith or machinist vises will serve the purpose. The apparatus is designed to be used on any table up to four feet in height.

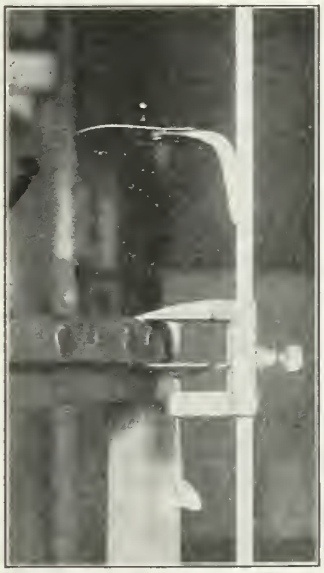


Fig. 1. Sacral support.

It will be seen from the illustration that it consists of a central table clamp, holding the sacral support, and two adjustable extension members fastened to the table with similar clamps and united at their distal end by a telescoping brace. The whole apparatus is made out of ½-inch galvanized iron pipe and fittings and 9/16-inch round steel rods sliding into them. The long screw, which is fitted with a crank to provide the fine adjustment of the extension, is made of a carpenter's bench vise screw, with the "T" for the handle bar cut off just beyond the collar, which is retained and fastened in its normal position for the purpose of loosely holding the swivel face plate to which the leather cuffs for extension of the extremities are attached with harness bolt snaps. The female part of the screw is rounded off and is attached to the end of the upright bar. The coarse adjustment is made by a rod sliding into a pipe. The ends of the pipe carry thumb-screws for tightening the adjustment, and are reenforced by ½-inch galvanized unions. The apparatus may be taken apart and packed in a large suit case, and the weight is about twenty-five pounds.

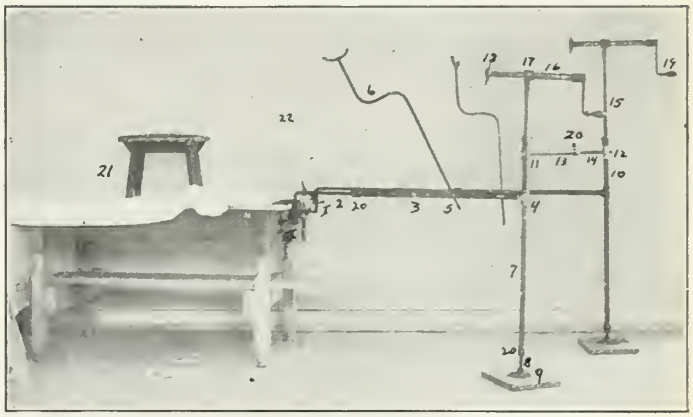


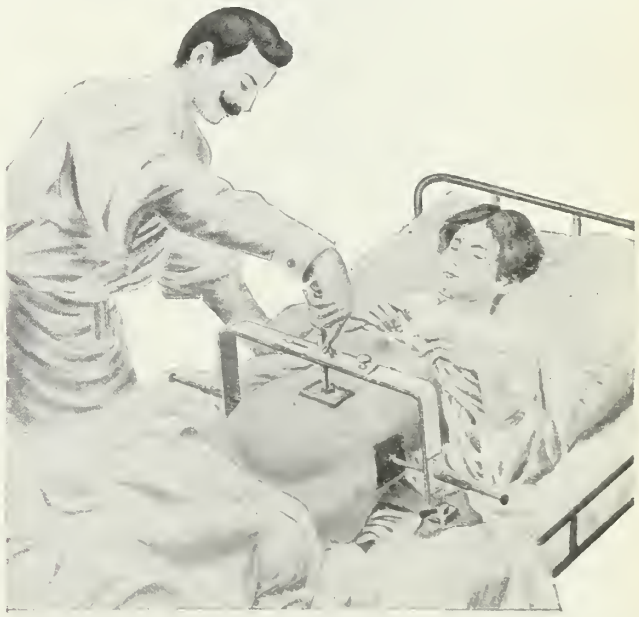
Fig. 2. Hip and leg extension apparatus.

Dr. Stearns has furnished the editor a detailed descriptions of the component parts of this simple, yet apparently efficient, support and extension apparatus, but lack of space prevents us from printing them here. We presume, however, that the doctor will be willing to supply these directions and figures to any surgeon or hospital superintendent who will apply for same.

Aorta Compression Apparatus.

BY DR. GAUSS, FREIBURG, GERMANY.

A new apparatus for instrumental compression of the aorta abdominalis, suitable especially for hospitals in obstetrical work, has been designed by Prof. Gauss, of the



Gauss' Aorta Compress.

University Hospital, Freiburg. This apparatus is to take the place of Momburg's rubber tubes and other bandages of similar nature. It is considered by some authorities that the instrumental compression of the aorta abdomi-

nalis affords a safe and effective method of stopping hemorrhage after childbirth, in contrast to the Momburg method of employing a rubber tube, which involves complete binding of the lower part of the body.

The application of this apparatus is confined to an isolated compression of the aorta abdominalis immediately above its division into the two iliac communes. This type of compression is further considered preferable to the Momburg method in view of the delicate and consequently protective regulation of pressure which can be produced. It is stated that injury to the heart, intestines, and bladder are practically impossible.

A New Bed-Pan and Excreta Sterilizer.

The bed-pan sterilizer illustrated here was exhibited and demonstrated by the manufacturers, the Wilmot Castle Company, of Rochester, N. Y., during the meeting of the American Hospital Association at St. Paul recently, and for the benefit of those superintendents who were unable to attend the meeting a description of the apparatus is given.

This new sterilizer is distinct in design, and intended only for handling bed-pans and their contents. It avoids the disagreeable task of emptying pans by hand into an

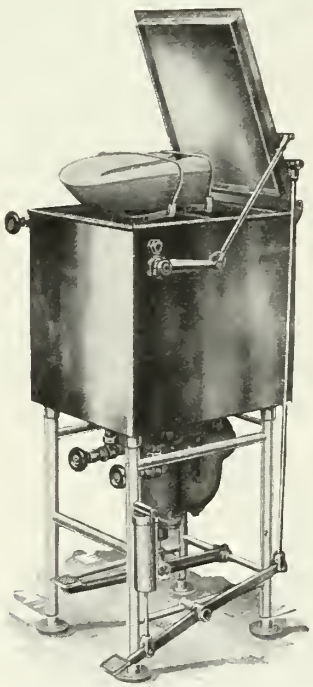


Fig. 1. Bed-pan as placed in sterilizer.

open sink or hopper. The pan is placed in the sterilizer right side up, and is then automatically inverted and emptied as the cover is closed. It is thoroughly washed inside and out by water sprays. The pan and fecal matter are positively sterilized by steam, but no odor or steam escapes into the room. The trap and cover are operated by foot pedals.

The sides and cover of the sterilizing chamber are made of heavy planished copper. The base is a smooth bronze casting, so shaped that it drains quickly. The steam chamber for heating is cast in the base, eliminating all steam pipes from the interior of the sterilizer. A 3-inch opening is provided in the back of the sterilizer for connection to a vent pipe. The entire interior is heavily coated with pure tin to prevent corrosion, and the exterior is handsomely nickel-plated. A deep lip on the cover fits into a water seal on the body of the sterilizer, preventing the escape of steam and odors into the room. The size of the

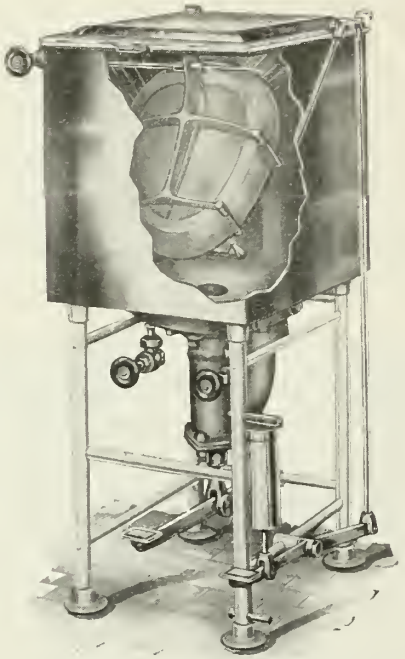


Fig. 2. Bed-pan as inverted in sterilizer.

sterilizer is 15x18x17 inches. The use of such an apparatus is now considered essential, especially in contagious wards.

Plague Work in New Orleans.

The country at large can have no adequate knowledge of the magnificent work that the Public Health Service of the Government is doing to eradicate plague from New Orleans. It may be of interest to know that since the first announcement of the plague occurred in July, the following work has been done: Fifty-nine ships have been inspected and fumigated; 25,000 tons of freight have been inspected, consisting of 202,986 packages; 3,169 cars have been inspected, of which 1,681 were rendered ratproof. The railroad freight inspected and passed was destined for forty states in the union and Canada and the District of Columbia.

The total number of rats captured to September 12 was 79,543, of which 68,595 were examined microscopically. Nearly every dwelling house, factory, hotel, hospital and miscellaneous structure has been examined carefully and rendered ratproof.

No new cases of rat plague have been found during the past week, and it is confidently expected that Assistant Surgeon General Rucker, of the department, and his associates have finally exterminated every source of infection.

It is true that Surgeon General Blue, Assistant Surgeon General Rucker, and their associates had had the experience of San Francisco and the Pacific coast in the extermination of plague, but the magnificent work that has been done and is still being done in New Orleans ought to give abundant assurance to the people of this country that the agencies of the public health are in the most capable hands that could be conceived.

The Marengo Avenue Hospital at Pasadena, Cal., is soon to have a new home. Work will be begun shortly on a $40,000 building of brick, stone, and reinforced concrete construction.

DEPARTMENT of NURSING

Mary M. Riddle, R. N., Editor,
Superintendent Newton Hospital, Newton Lower Falls, Newton, Mass.

Standards and Registration.[1]

BY GEORGE DOCK, M. D.,
Professor of Medicine, Washington University Medical School, St. Louis.

I have been asked to say something about nursing from the standpoint of certain problems and struggles in the study and teaching of medicine. These problems and struggles are concerned chiefly with the effort to improve both the study and practice of medicine, and, I suppose, it is hoped that our experience in medicine may be useful to you as a light or guide in your own struggles. I take great pleasure in trying to meet your wishes, encouraged by the very general suggestions made me, but I realize at the same time that, in some respects at least, I may seem to rush in where angels fear to tread.

Medical education in America has many interesting features. Its history cannot be said to be the kind described as philosophy teaching by example. Often of philosophy there has been none. Opportunism has been the key to many changes—even some advances. Many other advances can best be ascribed to huddling, a method that often seems our chief resort in America, but one that a great poet has assured us will save us in the end. We have now, happily, reached a point where clear vision and broad aims are open to us, and in our advance, no doubt, there are many things that may benefit nursing—not, I think, by blindly following, but by noting the drawbacks and benefits that have followed one or the other course of action.

No matter how objectionable the thought may be to some, medicine and nursing have much in common. Doctors in all ages have often carried out all the details of nursing. Nurses—i. e., wives, mothers, great queens, like Theodora, and a goddess, Hygeia—have done some of the things doctors do: gathered medicines and prepared them, dressed wounds and dislocations, and ministered to pain. I can remember when nurses were taught their art by men physicians—not only anatomy, bacteriology, chemistry, and materia medica, but bedmaking, changing clothing, brushing hair, and other details of the toilet.

But medicine has in that same time become more complex than before. It is a commonplace, wherever medicine is celebrated, to hear of its advances—even of its perfection. The advances have, indeed, been extraordinary. The change from ox-cart or pack animal to motor car or aeroplane is trifling compared with it, and yet those who are most deeply interested believe that progress in medicine has barely begun. These changes could not be without affecting the details of nursing and the study of nursing, but nursing has other phases. Being one of the fundamental feminine activities, it is inextricably associated with many other details of that great social and economic manifestation that, for want of a better name, has been called the feminist movement. The nurse is no longer a mere maker of beds, administrator of medicine, and soother of pain, just as the doctor is no longer a maker of pills and potions. She has become the eyes and the hands of the doctor in dozens of details besides the elementary features of pulse counting, temperature taking, and medicine giving. The more learned and expert the doctor, the more can he and the patient profit from the accomplished nurse. The nurse cannot do her duty without also taking part in the essential features of the doctor's work, the prevention of disease, the conservation of health—not merely in the abstract, but in every patient cared for. Then, just as the doctor is often obliged to specialize, the nurse, too, often finds it proper or necessary to limit herself to certain lines, to perfect herself in certain details. But she cannot avoid going on to still other lines of work. From her training she becomes now a chef, a housekeeper; or manager of an asylum, sanatorium, or other great institution; a school nurse, department store nurse, fresh air camp nurse, or excursion nurse; a health inspector, factory or sweatshop inspector; milk station manager or assistant; insurance nurse; specialist in anesthesia; an x-ray or Finsen light operator; a social service expert; a charity aid or organizer; the organizer of complex and extensive movements in times of war, floods, and other calamities.

It may be worth while to linger on one or two of these points. Women, especially trained women, have often demonstrated a peculiar ability in all service requiring the highest form of order and neatness—that form of asepsis that is as essential in a store room, kitchen, or dining room, a back yard or stable, as it is in a surgical operating room. This faculty, with the training of a modern nurse, would admirably fit women for much needed positions as health inspectors in town or country. Such work will soon be demanded. Medical schools are making almost no effort for training either physicians or others in the fundamental sciences that may fit one as a sanitary inspector. There is much likelihood that engineering schools, that have in general a keen appreciation of coming demands for expert service, will prepare men for some of these positions, but they cannot train enough for an enlightened demand that must take the place of our casual work, as shown in yard cleaning, fly swatting, or antimosquito work.

A considerable amount of work is done by many doctors in making their own biological preparations, especially serums and vaccines. These cannot be made by the men who formerly made pills; the physician cannot resort to the large manufacturing pharmacist in many cases; the trained nurse, essential for other services, should attend to these—with a suitable addition to her salary. In a way there is a loss of energy in this movement. No doubt in time it will be possible to direct the education of many of the women who now go out from training schools into diverse pursuits so as to save time. But it is not easy to make the necessary modifications, any more than it is easy in medicine to enable an ophthalmologist, for example, to follow a different route for six or seven years from that followed by the general practitioner or the obstetrician. In dentistry early specialization is carried out, and it is generally recognized, I think, by those on the inside, that this has caused a serious loss and one difficult to repair. It may be asked why should the nurse be bothered with so much erudition as is included in the preparation for the careers suggested. One does not in truth need to be a

[1]Read at the annual convention of the National League of Nursing Education in St. Louis, April 23-29, 1914.

trained nurse to carry on some of the simple functions of nursing, and I think it would be a mistake to try to prevent some nonprofessional work, just as I think it is a mistake to try to prevent persons who have not studied medicine from giving simple treatment to the sick.

Of course, I must hasten to point out that in each case it must be clear the functions are imperfect, rudimentary, or partial, and, unless experts are utilized when necessary, serious damage will follow.

If we accept these views of the present status of nursing, what shall we say about the proper training for nurses? Here the word standardization has been suggested to me. I would not reflect on the tenacity or determination of nurses by suggesting that high standards are difficult to achieve, but I think I can without hurting anyone's feelings point out that standards may be sought without real gain. We must ask what sort of standards we aim at. I think it cannot be denied that in medical education many have arrived at a standard of curriculum —on paper—thought to be ideal, and, strong in the faith that this had been accomplished, more important standards were overlooked. For example, standards of previous education—not on paper, but in fact; standards of fitness, physical and mental, perhaps even more important in nursing than in medicine; standards of facilities for teaching—physical facilities as well as trained teachers, enthusiastic teachers, teachers of the living words of science and not dispensers of the canned words of learning, standards that aim at ability to criticise and analyze, and not merely memorize. Again, of standards of personal development of power to think for oneself; standards that use the living patient, through the eyes of the student, rather than the embalmed "case," as seen through many eyes, in turn all more or less astigmatic or myopic, if not cataractous.

It must be admitted that in medical study a tendency to adopt cut-and-dried plans, a Chinoiserie, has been more marked than a vital method of teaching and study. Those who wish to obtain an accurate view of the present status of nursing education, and many wise suggestions on various phases of it, should read the pamphlet issued by the United States Bureau of Education (Bulletin 1912, No. 7). It would seem worthy of some great philanthropist to make a foundation under which all hospital boards and training school committees should be required to pass an examination on this work. In the following remarks I may seem to have borrowed much from it, and indeed that is unavoidable, though I have, so far as possible, spoken from convictions growing out of a rather long experience.

One of the first problems I take to be the nature and amount of education required of the candidate for the training school. It is obvious this must depend on what is required of the nurse. From what I have said of the field of the trained nurse it is clear the requirements are by no means low or simple. At the least, the nurse is the aid of the physician. The latter has taken a large part of biology as his study, and the nurse cannot cooperate with him unless she has at least some little understanding of the language of modern natural science, nor could she have the necessary knowledge of the processes in the sick man. Today we are doing all we can to increase the knowledge of disease processes among the public in general. The beginning is the golden time in the treatment of disease, and some of the greatest advances in medicine have come from letting people know the importance of paying attention to early signs. From this our knowledge of appendicitis has enabled thousands to escape dying of "inflammation of the bowels;" it has saved the early tuberculous from dying of consumption, and has done something and will do much more for cancer, to take only a few examples. Evidently the nurse must know more than in the past.

If we ask what previous preparation is necessary for nurses, it is certain that less than a high school course of the highest grade is insufficient. It should be possible to begin the essential training of the nurse at this point. In medicine it has been found easier to require a larger knowledge in order to save time in the medical school, but the results of this requirement are causing much difficulty, and it would seem well in nursing if you could insist on a lower attainment, well and honestly carried out, and build your professional education on this. This will put a serious responsibility on authorities of training schools. Just as in medicine, greater knowledge of natural sciences, of languages, or of other useful or cultural subjects will fit the candidate for more advanced work, for greater diversity of choice, and for larger responsibilities, and it would be well for the profession if women with either full college courses or with well-planned partial courses could be attracted to training schools. Such people should not demand that the training school make any allowance except for identical courses. Inward satisfaction and the certainty of larger opportunity should be sufficient reward for the greater amount of time spent.

There is an important detail touching standards—the age of admission. The high school graduate will be about 19 years of age. Few will be mature enough in mind and body to get the best results of the training at that time, and still fewer can safely run the physical risks of the training as now arranged. Broken arches, weak backs, and more serious diseases will be the consequences. In the case of those who wait some time after the high school course to enter the training school, investigation as to the occupations followed in the interim would be useful. The idle, the frivolous, the disappointed will be undesirable, but those who have successfully followed any definite career should make better pupils, fitted for higher service.

The matter of a standard curriculum is another difficulty, partly so because, just as was the case in medicine, there is no definite authority to enforce standards. Volunteer organizations can promote many good aims, but solidarity and pity will make regulations lax. In medical education one of the most salutary factors was the intercession of the Carnegie Foundation, chiefly, I think, because it had no personal interests or prejudices, and it would be most beneficial for nursing if it could have some such general and nonpartisan guide and critic. The standard curriculum, I think, should be a minimum one, not only for the benefit of the weakest schools admitted, but in order to provide elasticity and the best arrangement for individual work. Moreover, anything else will lead to dishonesty and to ultimate disappointment on account of inevitable administrative difficulties.

For a long time there must be many grades of training schools—from those in strong universities, with well-managed hospitals and good teaching corps, down to some that need not be described. In medicine, schools of many grades are admitted to standard rank, particularly so before boards of examiners; and I imagine nursing schools will have the same experience as state licensure becomes more widely adopted.

One thing that long retarded the elevation of medical teaching was the multiplication of schools. The situation in nursing is now the same, and much more is concerned here than the difficulty of raising standards. In many

training schools, I believe, a method of teaching is followed that has long been abandoned in medical schools. I refer to the custom of taking the practical or clinical training first, or from the first, and the scientific or theoretical part—that is, the study of principles—later, often incidentally. It is probably not necessary, certainly not profitable, to refer to the fact that many training schools are managed chiefly for the benefit of the hospital, a feature that makes impossible a close comparison with medical schools. The difference has not always been so clear. Many training schools began, as many medical schools began, because there was a demand for teaching. As the states made no effort to provide medical schools, as the universities either wholly neglected the medical departments they had, or even cut them off, the organizers of proprietary medical schools cannot be censured as harshly as has been the custom in recent years. In training schools a similar condition developed. Hospitals needed nurses, authorities would not furnish the means of education, and, as Doctor Worcester has well said, "it was not at first recognized that the art of nursing, like every other art, can really be taught only by a master of the art, and that masters themselves must have had thorough training."

In the improvement of teaching, it seems to me, this feature should be worked at from the earliest possible time. For the practical work, multiplication of schools is not undesirable. On the contrary, the teaching must be either individual or applied to small groups. For the more scientific branches, even if teaching may be necessary in small groups, it will be difficult to find many suitable teachers. Some training schools, those connected with universities, can get them more readily than others, and it seems to me that the same teachers could with advantage teach the nurses from several hospitals. Such cooperative teaching could be applied even to the practical work, so that special hospitals could not longer be able to turn out nurses with the same kind of diploma given to those of broader training. Here, I think, must be one of the chief objects of standardization in the near future, and thoughtful organization is certain to produce notable improvements.

From the admirable work of Miss Nutting, it is plain that much has yet to be accomplished in revising working schedules. There is a remarkable contrast to medicine in this respect. For several years we have been cutting down hours of work so that, instead of spending twelve or thirteen hours a day in the medical school, an average of less than six hours a day has been reached. This, of course, presupposes some work outside of the school, but by no means as much as formerly. The reason for this change is to be found partly in the desire on the part of medical teachers to have medical students do independent work and independent thinking. Part of it, perhaps, reflects a widespread change in methods of teaching in general, a change that is associated with the disuse of the rod in the earlier classes, and that has been attributed to a different phase of the feminist movement, spoken of as the effeminization of the schools.

I have sometimes thought that one reason for the superiority of nurses in training exhibit to or with difficulty conceal from medical students depends on the fact that the former work from ten to twelve hours a day at distinctly arduous tasks, and then have to attend a class.

On the subject of long hours, Miss Nutting again should be carefully read.

In many medical schools the change from didactic to practical methods of teaching has been made without taking into account the need of many more teachers in order to instruct beginners in technics. Faulty methods can often be observed as a result. In nursing, also, I imagine the beginner often has to blunder along, without the advantage of seeing how an expert does various things. More trained workers, not necessarily class teachers, are desirable from this standpoint.

One of the finest things in nursing, in one way, but one of the most questionable in another, is the manner in which pupils have gone on for months or years repeating a routine no longer educative. Many have felt this, though perhaps few could have expressed it as well as Kipling's heroine: "She had not expected the path she had set before her to bloom with ease; but at the end of her first month she could have laughed bitterly at the difference between her consecrating dream and the fact. The dream looked to her vocation; the fact took no account of it. She had hoped to befriend misery, to bring help and healing to pain from the first day of her apprenticeship. What she was actually set to do was to scald babies' nursing bottles."

Medical students in hospitals, when learning by doing, often feel that they are set to doing too many menial things. They often fail to see the need of converting the conscious into the unconscious in the performance of a manipulation, or the wide educational value of repetition. Here, and I dare say in nursing, repetition and monotony of occupation can be carried too far, and they should be guarded against in training schools by a sufficient number of pupils, a sufficiently rapid change of duty, and a broader outlook on the reasons for doing things. I imagine that to the uninstructed mind the taking and charting of temperatures is almost as monotonous as sewing buttonholes at so much a hundred. To the initiated it should be each time as interesting as the unfolding of a rose.

In the need of greater space for patients and for laboratories, training schools have rarely kept pace with the needs of the time. I do not advocate elaborate homes. In fact, I think that, as the training school takes the place of the nunnery of former times, monastic simplicity should be the guiding spirit, with no effort at the curio-shop effect in private rooms so dear to the college student. But at a time when factories and department stores find it profitable to have rest rooms, reading rooms, tea rooms, swimming pools and in- and out-door gymnasiums for their employees, it would seem worth while for training schools to take the hint. Greater efficiency in both study and nursing would certainly follow; the improvement in health would pay the institution during the nurse's pupilage and add immensely to her value in after years.

I have been asked to say something also about registration and reciprocity, regarding both of which subjects, in medicine, many books might be written. Instead of trying to speak at length, however, I shall limit myself to a brief review of some salient features.

Perhaps no one would attempt to argue against the propriety of testing the fitness of those who wish to practice any calling involving the responsibility of lives and property. Incidental to such a test a formal register, recording the data, would seem equally desirable. Nevertheless, it is remarkable how long it has taken to obtain acceptance of the theory, and we still lack a rational carrying out of details. The reasons for this are not far to seek. They apply not only to medicine and nursing, but to many other important matters, such as divorce laws, contract and child labor laws, testamentary provision, pure food traffic, age of consent, woman suffrage, transportation, and other public utilities. This

state of affairs is due to a fundamental peculiarity of our institutions, one that could not be imagined when the constitution was adopted—when New York and St. Louis were further apart than St. Louis and South Africa now. Of course, it has no object at present, except the preservation of the belief in states rights, that is as useless now as a powdered wig. No doubt in time some way will be found to do away with this archaic state of affairs, but registration for nurses cannot wait until that time.

It is not likely that laws for the registration of nurses will encounter even a fraction of the opposition met by those who worked for registration of medical practitioners. In the beginning, no matter how reasonable the proposed laws, violent or insidious opposition developed, and the laws as passed represented compromises. In some cases the compromises were so dangerous that it would have been better for the community and the medical profession if the effort to pass the law had failed completely. The laws were unduly lax, allowed too wide a range for admission, or had other vital defects. I do not suppose that in the case of laws for the registration of nurses the opposition will be so active or so manifold, but doubtless there will be some opposition. Two particular features may be expected—one, the opposition of certain "interests;" the other, the wolf cry of "trades unionism." The latter, I imagine, you will have to meet more than the former, which in the case of medical laws included all the forces that profit by a low state of medical practice and a lax administration of sanitary laws—the great mass of purely mercenary practitioners, the "patent medicine" makers, and the beneficiaries of these groups.

One of the greatest difficulties has not yet been overcome, even in states in which enlightened public opinion has improved the laws in other respects. While medicine has become more exact and medical schools have reached a point where the teaching is largely practical and technical, examinations for licensure, with few exceptions, adhere to medieval methods that have been abandoned even in China, the last stronghold of formalism.

As regards reciprocity, unforeseen results grew out of our laws, so that it is difficult for men of standing in one state to acquire the right to practice in another. Curiously enough, the most exclusive states are sometimes those most plagued by unqualified practitioners of every kind, so that the general population suffers as well as the individual physician, who, for excellent reasons, may wish to move. I can see how a parallel state of affairs in nursing may be even more unfortunate than in medicine. Migration is desirable in order to raise the level of distant or isolated training schools; not only superintendents, but subordinate nurses will often be desired in the very states in which the trouble and expense of reregistration will be prohibitory. It is to be hoped that with the abundant experience of the allied profession you will escape the more awkward features of some of our registration laws, and secure the passage of laws that will benefit everyone and work hardship to no one.

"It may seem a strange principle to enunciate as the very first requirement in a hospital that it should do the sick no harm. It is quite necessary, nevertheless, to lay down such a principle, because the actual mortality *in* hospitals, especially in those of large, crowded cities, is very much higher than any calculation founded on the mortality of the same class of diseases among patients treated *out* of hospitals would lead us to expect."—Cook's Life of Florence Nightingale.

Demand and Supply as Related to Nurses and Nursing.[1]

BY FRED. S. MURPHY.
Professor of Surgery, Washington University Medical School, St. Louis.

In order to consider this problem of education of nurses intelligently we must analyze two factors—first, the demands made on the nursing profession, and, second, the means of meeting these demands. Under the latter heading we shall have to consider educational as well as physical means, or, it might be put, method and material.

The great demand of today is, as in ages past and as it always will be, the demand of service. We are prone to consider nursing as beginning at Kaiserwerth with good Pastor Fliedner in 1836. That was only the beginning of our conception of the modern trained nurse. Fabiola and Flacilla, fine Roman matrons of the fourth century, and numberless devoted sisters, had served, in so far as they were able, the sick; and doubtless Deborah, Rebecca's nurse, who "died and was buried beneath Bethel under an oak," attended her mistress with care and tenderness.

We do well to emphasize this demand of service. It has been, with the profession of nursing as with the medical profession, perhaps the greatest factor in preserving the highest ideals, for to render service to the sick is the first essential of both professions. Service, however, is too often interpreted to mean only manual care and sacrifice of self. Both are necessary, to be sure, but we must remember that the development of science has altered materially the possibilities of service. War and religion, the earlier compelling forces, offered and required primarily a manual type of service. Science demands, in addition, mental training. Walter Reed served humanity in a much more effective manner by his experiments with yellow fever than dear old Dr. McLaren in his care of the Highland folk; yet Reed sat by no bedside in the attitude of Watt's physician, with whom many of you are familiar.

So it is with nurses and their possibilities. The requirements of their service can no longer be considered as simply manual. It is far from my intention to decry the need for kindly and sympathetic manual service; in fact, you will remember that service—to serve the sick—was given as the first essential of nursing; but I would emphasize that there are other ways of helping the sick—that modern development has built on the great fundamental principle and has opened up new avenues of activity for the nurse no less essential than personal care. Not long since, to become a nurse meant actual bedside care in private or individual work, or the rare teaching or administrative position. Today, while the demand for actual nursing service is perhaps greater than ever before, the possibility of work in other fields has developed in a most remarkable way. As representing these new possibilities—in fact, they are demands made on the nurse by an insistent public—may be mentioned specialized work in the administration of institutions, work in the technical supervision of laboratories, work as assistants and supervisors in operating rooms, work as anesthetists, work as administrators of milk stations and public charities; school nursing, house visiting, social service work in general, and so I might go on almost indefinitely.

In short, besides requiring of the nurse a high degree of technical skill and intelligence in the actual care of patients and as assistant of the doctor, she is being asked to give material and efficient assistance in every health and social problem. This does not mean that every nurse would be qualified or equipped to undertake the special work, any more than it can be assumed that every medical

[1]Read at the annual convention of the National League of Nursing Education in St. Louis, April 23-29, 1914.

student will become a specialist. To most of you, as to most of us, general work will be the more attractive, and, with nurses as with doctors, general practice, if I may use the term, will and should be the goal, than which there is none other more noble or more essential. But to hold that the demands made on the nurse of today contemplate only manual training, or, if combined with mental training, mental training of a very superficial character, is to fail to appreciate what nurses are doing and what the public and doctors are asking them to do.

To follow our general scheme, let us now consider the means of meeting these demands. First, the physical means. Henley, in those wonderful verses in which he paints hospital life in the old Edinburgh Infirmary, gives us the picture of the staff nurse, old style:

> "With her broad Scot's tongue that flatters, scolds, defies;
> The thick Scot's wit that fells you like a mace."

But hastens to add—

> "Patients and students hold her very dear;
> They say the chief is half afraid of her."

And in contrast paints the staff nurse, new style, as one

> "Kindly and calm, patrician to the last,
> Who knows that she has exceedingly pretty hands,
> And speaks Latin with a right accentuation."

Different types distinctly, but both essentially fine; both women who have labored long that they might better be able to render service to the sick. So today we see the widest possible variations, influenced by community or sectional feeling, by the demands and possibilities of service, representatives from every self-respecting, hard-working stratum of society—a physical material which has perhaps been lessened by inherent weaknesses in the method of training, by limitations in the possibilities of service, but, so long as there be women, there must always be a large number who will feel more than any other call this call to nurse. It is an inherent feminine trait. To repress it is possible; to obliterate it, impossible.

The physical supply, then, may be said to depend on not only the demand, but the possibility of service and the method of training.

Remarkable as has been the development of systematic trained nursing since the pioneer work of Kaiserwerth and that immediately following in England under your patron saint, Florence Nightingale, we are agreed, I think, that the conditions controlling the education of a nurse have not been and are not uniformly ideal. With certain exceptions, of which none is more striking than the school at Waltham, training schools for nurses have been developed as an integral part of the service of great hospitals, even though many of the older schools were in the beginning governed by a separate board of managers and distinct from the hospitals. Grafted onto the purely commercial side of hospital life, the training of the nurse assumed of necessity a commercial aspect. She has been, and is too frequently, looked on as an asset of the hospital rather than an intelligent student serving in the work of the hospital in order to further the hospital's development as well as her own. Don't take it that I would imply that the sole idea in the minds of the governing boards of most of our institutions has been to take service and give nothing in return, for I believe that this idea is unjustly overemphasized today. The hospital had to give that which is essential in the training of the nurse—that is, patients and facilities—and if they tended too much to take what they could get in service and give too little in return by way of actual training with other than practical work, it should be looked on, as a whole, as an error in method rather than a selfish desire to get something for nothing.

Be that as it may, however, the training of the nurse has been, and still is, in my opinion, in too many quarters looked on as distinctly manual, and the training school as a part of the hospital service rather than a department interested primarily in the education—technical though it may be—of its pupils. The mental development, if considered at all, has occupied a secondary position. Now neither extreme can be looked on, perhaps, as desirable. A nurse with an extensive theoretical training, without practical experience and tact, compares unfavorably with her coworker who has had this experience and has tact. In the best hospitals the tendency to balance better these elements of training is evidenced by the increasing number of schools which are really giving sound preliminary and theoretical training, or have affiliated with some educational institution which is prepared to give this work, and also by the addition to training school staffs of paid instructors; but too generally, still, the nurse is trained because she can give the hospital something and not because the hospital has something which it wants to give the nurse.

This idea might be further developed by referring to the abuses which have sprung up in the small specialized hospitals quite unable to offer clinical advantages which are adequate, as well as failing wholly in offering theoretical training, where requirements of admission—in fact, requirements of service, except manual detail—were quite overlooked. If these defects have existed in the past, if they are preventing today too generally the preparation of the nurse to meet the demands of the profession, what solotion may be offered? It is always easier to offer destructive critisism than to offer a simple and practical way out. In considering a solution, we must, I believe, draw the line sharply between that which is possible and that which is ideal. Local conditions may prevent absolutely any attempt to develop what seems to me to be the ideal condition. Consider first that which is possible—the readjustment of existing opportunities. In order to do this, the scope of the demands on the nurse must be appreciated and the existing, well-established schools so modify their curricula and practical training as to meet these demands. Just such meetings as these are necessary to crystallize in the minds of the nurses themselves the needs for these changes—to educate the nursing body to appreciate the full possibility of today, and, while emphasizing these possibilities, to emphasize again, as always, that theoretical training, valuable as it may be, can never take the place of capable, tactful service in which self is subjugated and the needs of the patient or of the situation made the sole consideration, for trained nursing has been done many a grievous wrong by a failure to place service above self.

A demonstration of the needs and the formulation of a solution may be considered to be the first step, the step to be taken by the nurses themselves. The next step is to further educate boards of control so that they will feel a responsibility as to what they give in return for indispensable service; to educate men to appreciate the fact that the demands of today require a manual and theoretical training quite comparable, except in degree, to that of the doctor. To consider next what I would term the ideal development, I know that I am here treading on delicate ground. Tradition and precedent are not to be pushed aside lightly, for experience is a grand teacher. As I see the essentials for this development, they are, so far as the form of organization is concerned, an entity for the training school independent of direct hospital control; direction by an existing educational institution or by individuals in sympathy with and able to provide facilities for the education of the nurse as well as for purely technical training; opportunities for hospital service under conditions that

will assume the broadest and most exacting and practical training; opportunities for training outside of the hospital in the fields of public health, home visiting, and social service.

Educators are agreed that the successful development of any scheme of organization is dependent in large measure on the abilities of the teachers; so with the plan proposed. There must needs be combined administrative and technical ability of the highest type as well as ideals and visions, which consider not only the needs of today and tomorrow, but of the future. You know, I am sure, of the development of the training school in certain of western institutions, than which none is more interesting than that at the University of Minnesota, but it would be more vital, perhaps, if I tell you of the way we have attempted to solve this problem for ourselves here in Washington University, rather than to view and discuss developments elsewhere.

As isolated units, suitable for use in the education of the nurse, we have the medical school, hospitals, and dispensaries, the university, the training school, and the social service department—rather an unusual equipment, to be sure. If we fail to make use of it, the fault will be ours and yours, for the material is moldable to any degree by intelligent and insistent effort. I include you as a party in responsibility, because we must look to you, as representatives of the profession, for advice and support.

As the first step toward this new organization, we have placed the immediate control of the training school for nurses and the social service department under the hospital committee, which is composed of the heads of the clinical departments, the professor of pathology representing the laboratory subjects, and the hospital superintendent. This hospital committee is answerable to the executive faculty of the medical school, which, as any other university unit, is under the direction of the trustees of the university; that is, we have made the training school and the social service department independent units under university control, thus assuring protection from a too intensive consideration of service regardless of the return and direction by an institution primarily interested in education.

By this arrangement we have been able to supply adequate instruction by trained men and women, and laboratory work in the preparatory course, which is given in the laboratories of the medical school by the staffs of the various departments. The instruction in the nurses' home and in the hospital is given by trained nurse instructors. The department of English of the university has given various general lectures, and will, beginning with the fall term of this year, give two hours a week of systematic class work.

Two scholarships for post-graduate work have been made available, beginning with the present June class. A curriculum has been inaugurated which provides on an eight-hour day basis for a six months' preparatory period devoted to instruction in the fundamental subjects, a year of elementary ward work instruction, a year in advanced hospital work and instruction, and a six months' period for special elective training in hospital administration, special technical training, or social service work.

Our own hospital provides clinical training in medicine, surgery, and obstetrics, and the St. Louis Children's Hospital affords opportunities for nursing in all types of children's and infants' diseases. This hospital pays the university for service rendered. On moving to our new buildings, the Barnes Hospital replaces the present university hospital. This may require certain internal adjustments, but we believe that the fundamental ideals of control and development will in no way be altered.

Until recently our departments of training school for nurses and social service have been separate units under the immediate direction of individual heads, though both were under the direction of the same committee. On April 15 Miss Stimson was made head of the department of nursing and social service. We believe that the combination of these two departments, each to be administered by a distinct and adequate staff, will increase the efficiency of each, and make possible a development which is limited only by the opportunities of our community and our ability to meet these opportunities. Let me make it quite clear that we are not trying to combine the technical training of the nurse and the social service worker. We recognize fully that the demands of each service may require a wholly different preparation, but we are convinced that a certain amount of social service work may require elements of nursing, and that much of the nursing work might be better done if to the technical training were added the elements of the social service work. We want to supplement the one with the other wherever that may be desirable, without in any way subordinating either. We recognize that, owing to physical difficulties incident to our present location, it has not been possible to carry out in every detail all that we might have wished. For these omissions we can only express regret.

Now as to the hopes for the future. If the fundamental idea is accepted that the training of the nurse is as esentially a mental as a manual problem, then this training, just as training in any other educational line, can be best furthered as a department of a university. This we definitely plan to accomplish. Up to the present, limitation in the number of applicants, with a sufficiently extensive preliminary training to admit them on the same educational level as the university students, has prevented this. The university, however, stands ready to establish a department of health and nursing just as soon as we can conscientiously advise them that the work is here to do. With the organization of such a department, a diploma from this department, whether it represents the intensive instruction in the specialized training of the nurse or along the lines of social service, will carry with it the same distinction as a university degree given in other departments.

On such a basis the training of the nurse immediately becomes a profession. Such a training is not alone applicable and desirable for those who expect to do this as life's work, but it should offer, beyond the mere technical side, a training equal to that of the university or college as a preparation for that greatest of all duties and pleasures—homemaking.

I believe that we have in no sense seen a glorified vision of the possibilities of this development in the training of women. The demands of the day require it; the available material, we believe, will justify it. Surely, satisfying this fundamental principle of supply and demand, the result cannot but be an advance.

"At the time when Florence Nightingale was in training at Kaiserwerth, Joseph Lister was a medical student at University College. Cohn, the founder of bacteriology, was only eight years her junior. Parkes, one of the founders of modern hygiene, was almost exactly her contemporary. It was inevitable that nursing also should be developed in a scientific spirit, and no one was better qualified than Miss Nightingale to take the lead in such a movement?"—Cook's Life of Florence Nightingale.

QUERIES *and* ANSWERS

Dogs as Plague Carriers.

To the Editor of THE MODERN HOSPITAL:

The communication is so easy between our city and New Orleans, where bubonic plague is said to exist, that we are just a little bit uneasy, and someone has pointed out the possibility that the dogs of this city may carry infected fleas from plague rats to human beings. Can you tell us about this?

SOUTHERN HOSPITAL SUPERINTENDENT.

We have taken the matter of your query up with the best authority in the world—namely, the Public Health Service of the Government. Dr. W. C. Rucker, assistant surgeon-general, answers the query as follows:

"With regard to your query relative to dogs as flea hosts, it may be stated that dogs do not have the plague, but they may act as the vehicle for the transference of plague fleas from plague rats to human beings. Several such instances have come under my observation. The moral is, the dog is the enemy of the rat, but he should be kept out in the yard where he can get at the rat."

We are coming to understand definitely that the dog is no household companion from a sanitary standpoint. The city of New York is now engaged, under pressure from Dr. Goldwater, health commissioner, in the passage of a law prohibiting the keeping of dogs in apartment buildings. The activities of New York are due to the immense numbers of children bitten by dogs suffering from rabies. Now we are told that dogs can easily become carriers of bubonic plague. This means that the dog as a household pet has got to go.

Obtaining Sleep in the Day Time.

To the Editor of THE MODERN HOSPITAL:

Our night nurses seem unable to obtain restful sleep in the day time. I suppose they could become accustomed to day-time sleeping and the noises of the street after awhile, but, about the time they begin to sleep, their night service is over. Nearly all our nurses lose weight during night service and become pale, and I am quite sure that it is due to their failure to obtain proper rest in the day time. What can we do about it? D. W. N.

This is a common complaint in hospitals, and training school superintendents try different methods. Some of them allow their night nurses to sleep in the "Home," and try to keep the day nurses quiet when they are off duty. I think this is a mistake. Young women off duty should be allowed to scamper up and down stairs and through the halls, and make as much noise as young women are accustomed to do in their recreation hours.

Opaque window shades make it necessary to have the windows closed, as do also heavy draperies. It seems to me the old-fashioned Venetian shutter is the best device for accomplishing the purpose. The slats of these shutters can be made to lie snugly and yet let in plenty of fresh air. Some hospitals have these shutters in all the windows of the nurses' home, so that nurses do not have to change their rooms when they go on night duty. It seems to me the best way is to have a group of rooms for all the night nurses, and these should be away from the home and away from noises as much as possible; but attics are not good places for night nurses, especially in the summer time, because they are too hot. Better try the Venetian shutters.

JOHN A. HORNSBY.

"Condition Book" for Hospital Office.

To the Editor of THE MODERN HOSPITAL:

I saw somewhere a form for a "condition book" for the use of the hospital office, so that the telephone girl could answer inquiries without having to call the nurse on the floor each time. Can you tell me something about the form of this book? T. E. P.

What you saw was in the form of loose-leaf ledger sheets. It was devised for use several years ago for the Michael Reese Hospital, Chicago. The complete sheet is 11x14 inches, ruled and cross-ruled, there being eleven spaces. The first space is 2 inches wide, for the name of the patient, and each of the other spaces is ⅝ inch wide, the headings being as follows: "name," "location," "good night," "poor night," "better," "not so well," "to be operated today," "operated yesterday," "seriously ill," "not seriously ill," "refer to head nurse."

The method of procedure with this book is as follows: there is a binder for each unit of the hospital. The names of all new patients are written on one of the sheets in the main office downstairs by the night clerk, and discharged patients are stricken out. These names are kept up from day to day as admissions and discharges occur. The last duty of the night nurse in the morning is to check off the spaces and tell the story of the night, as, for instance, "Betty Jones—female surgical ward; had a good night and is better this morning; she is not seriously ill." The last duty of the day nurse is to check up the book for the night.

The check marks are made in soft pencil and can be easily rubbed out, so that the book is fresh for the nurse to report on. It seems to have answered every purpose, and to have saved very much telephoning between the office and the floors.

Care of Battleship Linoleum.

To the Editor of THE MODERN HOSPITAL:

Can you tell me what is the best preparation to use on battleship linoleum as a preservative and for cleaning properties. We are just laying a considerable quantity of linoleum in our new additions, and I was wondering what preparation, if any, should be applied at once before the floors are used, and also what is the best method for routine cleaning afterward. W. A. DAKIN,
Superintendent General Hospital, Regina, Sask.

I have had occasion recently to go through a large number of hospitals, some of which have considerable quantities of battleship linoleum, and I find that about three-fourths of all the linoleum that they have on their floors was badly laid originally, and consequently is not as satisfactory as it should be. If it isn't too late for your purpose, may I suggest to you some of the details of laying these floors?

The surface underneath should be smooth and free from bumps. The linoleum should be cut so that it will lap over at the edges three or four inches on all sides. Then it should be laid in place and sand bags, weighing from twenty-five to fifty pounds, should be laid all over it and should be left there for a couple of weeks or longer. Then the linoleum should be cut exactly to fit the floor, and this should be done very carefully by skilled people, using sharp tools. After the linoleum is cut, the pieces are taken up and relaid, piece by piece. Before each piece

is laid down, the cement which comes with the linoleum should be spread over every part of the under surface and should be used freely, preferably with a whitewash brush. Then the linoleum should be laid and fitted snugly, and the sand bag weights should be put on again and left there until the cement is thoroughly dried, which will take perhaps a week. After this you will find that the cracks between the lengths and at the ends of the room are very small, but they must be filled up with the same kind of cement. That will keep the water out everywhere.

After you have done all this you will have a thoroughly well-laid battleship linoleum floor. I doubt very much if anything should be put on these floors as a preservative for the first six months or a year. I have used raw linseed oil on them, and that has at least kept out the stains; hot water and soap will wash this oil off at any time, although I doubt if I would use it again, because it seems to soften the linoleum, and I think impressions are made by boot heels and table and chair legs more easily and deeply than if no oil had been used. I think the best cover for the linoleum at first, if it is to be tramped by workmen, would be paraffine. This can be scraped and put on as we do for a dance floor. A better way still is to melt it and put it on with a whitewash brush. Then, after the workmen are out of the building and the furnishings have been put in, and the room ready for use, this paraffine can be taken off with hot water, and the floor will be as clean and pretty as when it was laid.

I think the best permanent preservative for battleship is the ordinary shellac floor varnish, which we know as spar varnish. That is the treatment used at the Massachusetts General Hospital and the Peter Bent Brigham, and Dr. Howard, who initiated that practice, finds that the floors give no further trouble.

JOHN A. HORNSBY.

Land Values Affected by Hospitals.

To the Editor of THE MODERN HOSPITAL:

We are asking for the location of a tuberculosis sanatorium in a neighborhood not very far from a little village, a group of dwellings. As there are two or three stores in the village, the residents say that patients at the sanatorium would go into the village to purchase things, or as a relief for the loneliness of the institution, and would mix with the inhabitants of the village and transmit the disease. They also say that the presence of a sanatorium in the neighborhood would depreciate land so that it would be practically worthless. Is this true, and is a tuberculosis sanatorium or a hospital a hazard in a community? A WOMAN WELFARE WORKER.

The hospital hazard in a community is an old fetish, and in the days when hospitals were infected from cellar to garret, and the source of infinite cross-infections, it is probably true that the hospital was a menace in a community. That isn't true any longer. The writer will cite just one instance within his own personal knowledge: In 1905, when it was proposed to build the new Michael Reese Hospital on the lake front of the south side in Chicago, land values were so depreciated that a number of pieces of property in the immediate neighborhood were sold under the sheriff's hammer, and the neighbors of the hospital deplored the fact that their homes were ruined and that they would have to sacrifice them at great loss.

As a matter of fact, the hospital was completed, and within sixty days from the time it was opened to patients its lawn became the neighborhood playground for the children, who became a great nuisance, and their parents grew indignant if the hospital protested against their going all over the place. When the neighbors found that unsightly cripples in their ward clothes were not placed on exhibition, and that windows and balconies were not decorated with urine- and feces-stained mattresses, but instead of that there were potted flowers in the windows, plotted lawns and flower beds, and that, instead of the clanging bells of ambulances rushing to and fro, there were processions of beautiful ambulances coming and going, bringing and taking prominent men and beautifully dressed women, the whole situation changed, and the lands jumped up in price until the hospital, when it wanted to build other buildings, had to pay extortionate prices, prices more than 100 percent—in some cases 200 and 300 percent—greater than would have had to be paid for lots ten blocks away. So the hospital blight in at least that one case turned out to be a great benefit to the whole neighborhood.

Dr. Evans, of the Chicago *Tribune*, has recently looked into this matter also, and published a long article on the subject in his syndicate of papers on August 2, in which he quotes a number of prominent sanatorium people on the subject. We append a partial list of those who wrote to Dr. Evans, and what they said:

Dr. Garvin, of Raybrook, reports that the value of land around there was about $4 before the sanatorium started. It now ranges from $50 to $160 an acre.

Dr. Lyman, of Wallingford, Conn., reported: "All land has more than doubled in value."

Dr. English, of Glen Gardner, N. J.: "Increased at least 50 percent."

Dr. Nichols, of Hebron, Me.: "Increase of about 20 percent of valuation and tax."

Dr. Butts, of Eagleville, Pa.: "Increase 25 to 50 percent."

Dr. Pettit, of Ottawa, Ill.: "Increase 33⅓ percent."

Dr. Sauer, of Hospital and House of Rest, New York City: "Increase at least 100 percent."

Dr. Barnes, of Wallum Lake, R. I.: "Land at least double what it was before sanitarium was erected."

Dr. Chadwick, of Westfield, Mass.: "Twenty-five to 30 percent increase."

Dr. Pottenger, of Monrovia, Cal.: "It has increased."

Plans for the establishment in Philadelphia of a hospital for the special study and treatment of diseases of the digestive organs were announced recently. The institution is to be known as the National Stomach Hospital. It will prosecute the work along four channels. The first step will be to open a dispensary for the treatment of diseases of the gastrointestinal tract and allied organs. Laboratories for examination and investigation of the diseases of the organs of digestion, a research department for the special study of the causes of cancer affecting these organs, and a school of dietetics for the study of food values will be maintained. Three members of the faculty have already been named; they are Dr. Ludwig Loeb, director of the department of medicine; Dr. Mitchell P. Warmuth, director of the department of surgery; and Dr. George E. Phaler, director of the department of laboratories.

Judging from press reports, it would appear that the "dammerschlaf," or "twilight sleep" method of childbirth, which originated in Germany, has passed the experimental stage in New York and other eastern cities. At the Jewish Maternity Hospital in New York the success of the method employed in 125 confinements has been such that the management feels warranted in building a seventy-room addition to be devoted to "twilight" cases, and has announced that work will be begun on such an addition in the near future. In the Bronx a $50,000 corporation has been organized for the purpose of establishing a private "twilight" sanatorium. The Long Island College Hospital is said to have been using the method as a matter of routine since the return of Dr. John O. Polok from the Freiburg Clinic some months ago. It is reported also that the Hebrew Hospital, the Hospital for Women of Maryland, and the Johns Hopkins Hospital, all of Baltimore, are investigating the "twilight sleep" with the view of adopting it.

LETTERS TO THE EDITOR

Dr. Garrison Makes Correction.

To the Editor of THE MODERN HOSPITAL:

On page 12 (footnote) of THE MODERN HOSPITAL for September I notice that I am referred to as "Colonel Fielding, United States Army Medical Corps." Will you kindly note that, except for a first lieutenant's commission in the Medical Reserve Corps, I hold a civilian position (principal assistant librarian) in this office, but I am not in the regular line of the army.

F. H. GARRISON.

Chef Pleads for Recognition.

To the Editor of THE MODERN HOSPITAL:

In your excellent magazine, THE MODERN HOSPITAL, for the current month, among the highly instructive articles which it contains, I have been particularly interested in the draft of the hospital organization chart by Henry M. Wechsler.

Now, while the chart contains many good points, it seems to me that, considering the number of officials and employees who, according to the chart, would be required to run an institution of comparatively small dimensions, it looks more like a millionaire's castle than a sound and economical business proposition.

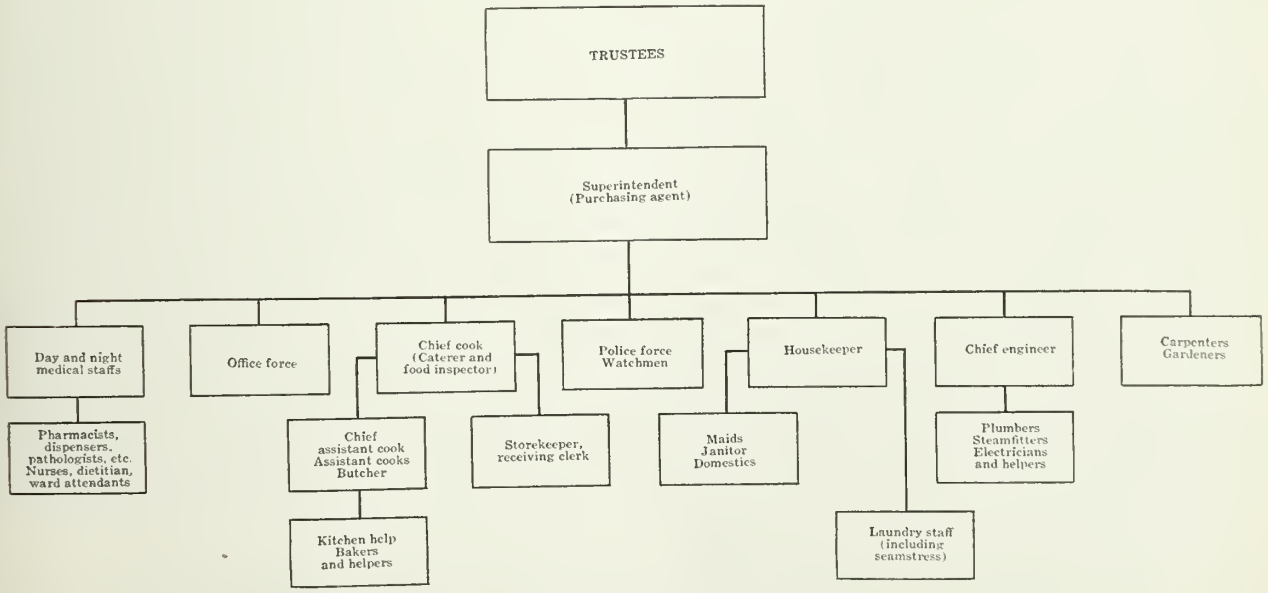
Your correspondent is not a professional writer, but takes his position on thirty years of practical experience in handling, inspecting, buying, distributing, and cooking all kinds of alimentary substances, and in all kinds of private and public institutions, and therefore claims to know "what's what." For this reason I am inclosing for the consideration of the readers of your periodical an organization chart of my own conception for an institution of from 300 to 3,000 inmates.

Now, Mr. Wechsler may or may not be familiar with the qualifications of the head of a department, which is one of the most important—I may say vitally important—divisions of an institution like a hospital. I mean the qualifications of the chef, whose prerogatives are constantly usurped by such persons as stewards, dietitians, housekeepers, and other unscrupulous persons who have an exaggerated opinion of the importance of their own jobs, but without assuming any of the responsible duties, and who are continually taking the credit that by right belongs to the chef. The word "dietitian" may be a high-sounding and scientific title, but in effect is only synonymous with "transmitter," and transmitter only of doctors' orders. Every one of those worthy and officious persons considers and treats a chef as being socially, intellectually, and financially inferior to himself and to the stewards, dietitians, housekeepers, and nurses.

Now, in consideration of the justice of the position I take in this matter, I hope that you will be kind enough to give my letter the same publicity you gave Mr. Wechsler's article.

LEON PESCHERET,
Chef at the Cook County Infirmary, Oak Forest, Ill.

Plans and specifications for the new nurses' and employees' home at the Oneida County Hospital, Rome, N. Y., have been approved, and the construction work will be begun at an early date. The building will be 36x96 feet, three stories and basement. It will be entirely fireproof except the roof support, which is to be covered with 3-inch planking covered with asbestos roofing. The ceiling under roof supports will be constructed of wire lath, covered with cement plaster. The foundation walls will be of concrete. The walls will be of red brick, trimmed with gray stone, while the backing of the outside walls and all interior partitions will be made of hollow tile blocks. The corridors and stairways will have white cement wainscoting 5 feet high, provided with a cove base. The building will be thoroughly equipped with fire escapes. The floors will be of hard, white maple on strips embedded in reinforced cement, except the toilet rooms and baths, which are to have tile floors. The entrances will all have tile flooring, while the floors of the corridors on the ground floor, reading room, kitchen, and dining room will be constructed of cement, with waterproofed cement finish. The interior wood finish will be of plain oak of a neat and simple design. Stairways will be constructed of reinforced cement. The heating of the building will be effected by vacuum steam taken from the steam main of the general heating plant of the Oneida County Hospital. The toilet rooms will be provided with separate air chambers and electrical fans, which will discharge the foul air through separate duct and ventilator to the roof. Bath rooms are provided on each floor. The structure will be completely wired in steel conduits for lighting all parts. The lighting fixtures will be semi-indirect, thus giving uniform light distribution, with little shadow effect. Piping will be installed for placing a vacuum cleaner. It is estimated that the completed building will cost approximately $35,000.



Hospital organization chart by Leon Pescheret.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Even the smallest hospital can have cracked ice for ward use. It is not good practice to compel nurses to gouge a piece off a big cake of ice in the box and crack it up whenever it is needed. Nurses do not always aim straight, and once in awhile the ice pick will go through the zinc or porcelain lining instead of through the ice. It is pretty hard on a towel to put a big block of ice in it and pound it on the floor; and it is hard on the nurse's hands to crack it in the open or in a box. A Little Giant or some similar ice cracker should be used to crack ice for the ward units. It can be put in a pail and set inside the refrigerator or ice box. If the pail is set on or against the ice, it will keep better. A shelf for the purpose is generally reserved in brine-cooled boxes.

It is coming along fall—that season between the heat of summer and the cold of winter when it is hardly cold enough to require artificial heat in the hospital and hardly warm enough to be without it. Better get your artificial heat going a little early rather than late, and take care of your humidity and the movement of your air in your rooms and wards. We know now that bad atmosphere of hospital rooms is due, as a rule, not to a lack of good air, but to the presence of dead air and the absence of sufficient humidity. If you can keep your room or ward at 65°, with a relative humidity of 60° or even 50°, and keep your air in motion by the use of a fan, your patient will be comfortable, whereas a temperature of 70°, with a low humidity and with motionless air, will be extremely uncomfortable, and the room will be smelly and musty. Keep your air moving, keep your humidity up, and you will save fuel and add to the comfort of your patients.

There is a word to be said about soaps in connection with the great European war. All our potash comes from Germany, and most of the finest soaps, including the green oil soaps, are made with potash. The day before war was declared potash was worth 4½ cents a pound; today it is worth 25 cents, and if the war continues it will be worth $1, and potash soaps will be prohibitive. But we are a versatile people, and, when the worst comes, our soapmakers will make good soda soaps, and they will find something to harden the soaps without having to use cheap fillers. Better begin to think about using soda soaps for everything in the hospital, excepting the hands and face. Castile soaps will be impossible to get presently, and their place will have to be taken by the so-called "float" soaps, which are soda soaps whipped up until they are full of air particles, and these soaps will answer nearly every purpose with careful use. The green oil soaps may have to be used, in spite of their high price, for washing wall paints, because the potash soaps are very much better for wall washing and do not take off the paint.

One of the problems of hospital management is what to do with delirious cases, especially alcoholics. There is no earthly excuse for sending delirious typhoids and pneumonias out of a hospital, and it is criminal to do so. Delirium tremens is an acute infection due to the cumulative effects of alcoholic poisons. Alcoholics are sick just as any other patient with an infection is sick, and he should get the same care. We have got past the shackles and "the solitary" and the padded cell for delirium tremens. The new psychopathic hospitals are teaching us how to take care of these patients and how to get them well. They are teaching us that depressant drugs and shackles cost more lives than any other method of treatment. Heart stimulants and hydrotherapy are the practice today, and, if these are properly done under the doctor's orders, hospitals will have very little trouble with the noise and refractoriness of alcoholics. The continuous bath, or a hot or cold pack, as the doctor orders, will generally quiet the noisiest patient, but these people should be taken out of the ward and put in a room by themselves during the period of disturbance.

Almost every day we are hearing of one or more commodities that are to be cut off because they are "made in Germany," or some other European country that is so busy with its war that it cannot attend to commercial affairs. It will be surprising to a great many of us to know how many things are made in Europe, and to the source of which we have given no thought in the past. There is no question that the war will do a most wonderful thing for this country in teaching us to make the things that we have been getting abroad. Twenty-five years ago nearly all of our cotton goods were made in England. We raised the cotton over here, sent the raw material to England at an extremely small profit, to be made up into cloth and garments over there, and we paid huge profits for the finished article when it came back to this country. Now we are making our own cotton goods, and, while the import duties have allowed our manufacturers to rob us, yet the money is kept in this country as a rule. What was true of cotton many years ago is true now of a great many things, and no doubt we will be making them by the time the European was is over. In the meantime it will be a mighty good thing if hospital superintendents will do some pretty hard thinking about substitutes for European things that will cost many times more than they have been costing in the past.

Dr. Charles H. Mayo told us at St. Paul the other day that if our medical men and surgeons made proper diagnosis before the operation, and did only necessary surgery, and did it well, so that their patients would recover rapidly and completely, the finances and efficiency of the hospital would be enormously benefited. While we are slaving our heads into a whirl, and trying by every expedient of an eighteen-hour day to save the pennies and dimes, let us see whether our doctors are doing their business right. Dr. Mayo told us further that if hospital records were properly kept, they would show whether the doctors were doing good work or not. Let us think a little about these things, and, while the doctors are asking more and more every day of their hospital, let us see whether they are giving the best they have to the hospital's work, and let us see whether the best they have is the best there is in the modern science of medicine. If not, we had better make them work their way up to the last minute in their literature and in the scientific mediums at their disposal. And let us see whether they are putting the proper amount of work and time into the business of the hospital. The hospital makes a doctor, and, as a rule, he is a success or a failure in his profession in accordance with the amount of clinical material and facilities he gets in his hospital, and according to the use he makes of these. We had better be thinking about whether the doctors are giving a quid pro quo for what they are getting.

Bonds to the amount of $100,000 were recently voted at Chattanooga, Tenn., for the improvement of Erlanger Hospital.

A SUBSTANTIAL TESTIMONIAL.

Hazleton (Pa.) State Hospital Possesses Fine Ambulance Presented as a Gift.

At a banquet given last winter by the people of Hazleton, Pa., in honor of Dr. Walter Lathrop, superintendent and surgeon of the State Hospital at Hazleton, some one suggested that it would doubtless be very pleasing to the doctor for them to do something more substantial, and it was then and there decided that the best automobile ambulance obtainable would be bought and presented to the hospital as a further testimonial of appreciation of Dr. Lathrop's service in the hospital and in the community. Accordingly subscriptions were solicited and contributions were made by people in all walks of life. As a result the State Hospital at Hazleton possesses probably the best and most thoroughly equipped ambulance ever built. The chassis is a six-cylinder White, and the body was furnished by the Rech-Marbaker Company, of Philadelphia. Following is a full description of the body with its equipment:

The body of the ambulance is 7 feet 9 inches long back of front seat, and 3 feet 3 inches wide inside on the floor. It has swell sides of solid wood panel, with four windows on each side in the doors. All of these windows drop, while the windows at the side of the driver are permanent. The front corners are round, and the upper part is filled with permanent glass. The frames in the windows are of colonial style and the glass is beveled plate. There are double doors at the rear, and in each of these doors is a drop window of the same design as the side. All windows are equipped with antirattlers and rubber edges on the sash, so as to eliminate all rattle. One side of the body, back of the driver's seat, is equipped with a door, while the other side is molded so as to give the appearance of a door. These doors are equipped with lever locks of the latest improved pattern. The front is supplied with a rain vision wind shield. The front compartment, in which the driver and attendant sit, is luxuriously upholstered in leather, with spring cushion and lazy back stuffed with the very best curled hair. The rear of the body is furnished with a step that folds upward, so that boys will not be able to ride on it. This step is made large and is easy of access. A 16-inch nickel-plated gong is placed on the side by the front seat. This gong has an improved lever arrangement that enables the gong to be worked with a hand lever from the inside of body.

The interior of the body and the sash are finished in solid mahogany. The floors are covered with heavy battleship linoleum, with round corners. This is made so that it can be cleaned very easily.

The equipment consists of two stretchers on rubber-covered rollers, which make them noiseless; a locking device to hold stretchers in place; one flexible stretcher, which is strapped in the top corner of the ambulance so as to be out of the way; one medicine chest; one inside brass lantern; two dome lights in the roof, worked by push button; silk curtains of a shade to harmonize with the coloring of the body, with spring rollers attached to all windows on the inside; one electric fan; one heater, Pullman lavatory, with folding basin and drain pipe; one Draeger pulmotor; one physician's valise; Pyrene fire extinguisher; one set of tire-saver jacks; one Klaxon horn.

Seats for the attendant are fastened to the back of the partition, between driver and ambulance body proper. There is also one double seat at the side for friends of the injured. These seats have cane bottoms and are made to swing up out of the way when floor space is needed.

The vehicle is handsomely painted in dark carmine with black moldings.

ROUTINE DISINFECTION BY HEALTH AUTHORITIES.

Technic in Vogue in This Country Generally Useless and Practiced to Quiet "Fears of the Family"—Scientific Principles Must Be Applied.

BY OUR NEW YORK CORRESPONDENT.

The publication and general acceptance of the researches of Koch and Pasteur revolutionized methods employed in preventive medicine, and, by establishing the germ of origin of infectious diseases, placed sanitation on a strictly scientific basis. Many specific organisms have since been discovered, and sufficient accurate knowledge accumulated regarding causation, as well as the media by which infectious diseases are transmitted, to render the disinfection processes practiced by most health boards in this country absolutely unjustifiable. Many of our health boards continue to disregard facts, and cling tenaciously to theories that scientific research and practical experience have proven erroneous. Sanitary science can no longer accept theories relating to the transmission of infectious disease that are unsupported by reliable laboratory evidence. Careful investigations, conducted by sanitary specialists, leave little doubt that infectious diseases are transmitter rarely, if at all, by fomites, and almost always directly from one person to another or through the media of food or drink, or by insects.

The farcical burning of magic powders, incantations, etc., for the prevention of disease, as well as the drastic burning of houses, are things of the past, but the public have still an extravagant idea regarding the necessity of extended use of disinfectants. The "fears of the family" are doubtless responsible for the universal disinfection of rooms after recovery of cases of infectious troubles, even where proper sanitary measures have been carried out during the course of the disease. In New York from 60,000 to 80,000 rooms per year are disinfected by the board of health. The rapid and effective permanganate method of generation of formaldehyd gas is employed, and care taken to close all chinks by generous use of adhesives and cotton. The rooms are left closed at least four hours, and then the woodwork, etc., is thoroughly washed with hot water and soda. Clothing, bedding, etc., is removed to the nearest municipal disinfecting station. These stations are equipped with steam disinfecting chambers (4x5x12 feet), built into the massive walls to enable feeding from the "soiled" room and delivery of packages after disinfection from the "clean" room. Thirty-five pounds pressure is used in the chambers for about half an hour. The steam is then removed and the goods dried by the vacuum method, this consuming another half hour. Books, records, etc., suspected of contamination are disinfected with formaldehyd gas in a closed chamber arranged with perforated shelves. Three times the quantity of formaldehyd gas used for disinfecting a room of 1,000 cubic feet is generated in this chamber, and the books are exposed for at least twelve hours. The health department destroys all books that may have come in contact with smallpox patients, each year burning 2,000 or 3,000 from circulating libraries. They also destroy clothing, bedding, etc., from apartments that have been occupied by typhus patients. School rooms and offices are thoroughly cleansed with hot water and soda in the event of an infectious case having entered.

New York City established the first municipal bacteriological laboratories, and uses bacteriological methods not only in diagnosis, but in determining efficiency of the routine work of disinfection. Its corps of disinfectors

numbers forty-five, with salaries ranging from $750 to $900 per year. A daily printed list of infectious diseases, giving at a glance the incidence in the various boroughs, is issued to schools, libraries, branch offices, medical inspectors, nurses, and institutions. In the near future we may look to New York City, the pioneer in the inauguration of scientific procedures in general sanitary work, to greatly limit municipal disinfection, especially of rooms, following infectious illness, inasmuch as it now enforces isolation, cleanliness, prompt destruction of discharges and other infected material during the course of the disease.

INNOVATION IN MUNICIPAL HOSPITALS.

Wilkes-Barre (Pa.) to Have Separate Hospital for Private Patients, to Cost $160,000.

A municipal hospital for private patients exclusively is to be erected at Wilkes-Barre, Pa. It will be separate from the present city hospital, although under the same management. The Wilkes-Barre *Record* gives the following interesting description of the proposed structure:

"The main wing of the building will be 132 feet long and 43 feet wide. Connecting with this at a sharp angle will be a wing 113 feet long. The building is to consist of three stories and basement. Brick, with terra-cotta trimming, is to be the material. The main construction will be of steel, with hollow tile, concrete, and the tile floors.

"The shape of the building allows all private rooms to face the east and south, so that they overlook the large space of grounds which are to be developed as a park area. There are, however, one or two sick rooms placed on the opposite side of the hall from the courts, so that they may be used where the bright sunlight is objectionable.

"Forty bed rooms are to be provided, many equipped with adjoining baths; in fact, there is a bath between nearly every two rooms, affording an opportunity for the patient to use the room with or without bath, or even to engage the next adjoining room and have a suite with sitting room, bed room, and bath.

"On each floor there will be a nurses' duty room at the angle of the hall, inclosed by a bay window and here the nurse in charge of that floor will be on duty constantly. Through the windows of the duty room the nurse can watch everything that transpires in either hall. She has an unobstructed view in both directions. The advantage of this design is augmented by a signal light system that is being installed. The patient is furnished with a hanging bulb switch, placed near the bed, and when something is desired the button will signify the call by a light over the door. The signal is not only shown over the patient's door, but also in the duty room on that floor on the enunciator and by the same means in the head nurses' office on the main floor. A nurse is immediately sent to answer the signal light's call. If the nurse finds need for a second call, in case of emergency only, she may press a button on the wall, away from the bed, which lights a red light over the door, gives the same light in the duty room and rings a bell in the main office.

"There are small serving rooms on each floor connected with the main kitchen and serving room in the basement by electric dumb lifts. The main kitchen is completely equipped with apparatus for preparing the special diet foods required by the patients and also for the more substantial foods for convalescents. The serving rooms on each floor are equipped with electric warming pans, hot and cold water, and appliances for serving broths, etc., at regular intervals without delay.

"There is a refrigerating plant in the basement used for the main food refrigerator, and it also circulates cold water through the building to the small refrigerators in each serving room. Besides this there are artificial ice manufacturing machines on each floor, making ice for cold packs, ice caps, cold drinks, etc.

"On each floor at both ends of the building there are wide sun porches screened in and designed so that they may be completely inclosed. These may be used by the convalescing patients. The roof is also to be equipped as solarium, being roofed in, for exercising and recreation purposes. Around the margin of the roof there will be parapet walls. These will be covered with tiling, making a promenade space.

"There will be two electric elevators for transferring patients and guests from one floor to another. The dumb lifts are the latest calling and sending electric machines. They may be brought to any floor by means of a push button and sent to any destination by means of another series of buttons.

"Besides the main entrance hall, office, and waiting room, there will be fourteen private rooms on the first floor and a bath and suite of rooms for the resident physician. The ambulance entrance will be in the basement, where also will be the kitchens, storage rooms, machine rooms, etc. The basement will be for the most part above ground because of the grade of the site. Because of this fact there will be found rooms in the basement equipped as living and sleeping apartments for special nurses who might be on duty in the building. The basement will also include the hydrotherapeutic establishment and x-ray department, these being thoroughly equipped with all modern apparatus.

"On the second floor there will be sitting and reading rooms for the convalescent patients, besides sixteen sick rooms.

"There will be two operating rooms on the third floor, a main room and secondary room, besides the etherizing room, doctors' dressing room, sterilizing room, lockers, etc. In the operating rooms the hexagonal tiling will be of a dull gray color instead of the usual pure white. The idea of this change is that the appearance is just as cleanly, while the floor does not reflect the blinding glare which often interferes with the surgeon's work while bending face downward over a patient. There will also be nine sick rooms on the third floor.

"The lighting in the entire building will be by the indirect system. The electrical equipment and wiring is decidedly novel and complete. Besides the lighting system, there will be the signal light call system, with its emergency equipment, electrically operated elevators, electrically operated thermostats to control the heating system, and intercommunicating telephone attachments in each room, which also will connect with the city for long distance lines.

"The telephone equipment will include about seventy-five stations, and it is probable that the stations of the old buildings will be included and all be operated by the same exchange. Heat will be furnished by a double indirect fan system. There will be a fan sending warm air and another fan drawing the used air to and from each room. The temperature of each room can be regulated to any degree of heat or cold by the electrically operated thermostats. But no matter what degree of heat or cold is desired, there will be the same amount of pure, fresh air in each room.

"The tunnel under Auburn street, which will connect the old institution with the new building, will be made large enough to carry steam pipes, electric ducts, etc., besides providing a passageway for the transferring of supplies and equipment apparatus and patients if necessary."

The plans were prepared by Sturdevant & Poggi, local architects.

Under a bill recently introduced in Congress by Representative Raker, of California, all regularly organized and incorporated fraternal bodies would be allowed to obtain tracts of government land for sanatorium purposes. The main object of the fraternal organizations is to obtain, in each case, a sufficiently large tract of land upon which a modern sanatorium may be established in arid, semi-arid, or mountainous states in a salubrious section, where the ill members of the organization may be treated and cured, particularly in cases of consumption. The Public Lands Committee has reported to the House that there are large tracts of land in the public land states which are practically useless for individual holdings. The bill permits the secretary of the interior to withdraw or reserve the land applied for, for not exceeding two years, to enable any fraternal organization to investigate and determine the condition of the climate, soil, water supply facilities, and other questions before obtaining patent. Then the organization could get not exceeding four sections of unoccupied nonmineral, arid, semi-arid, or mountainous land by placing substantial improvements, the land to be used exclusively for sanatorium purposes and, if not so used, to revert to the United States.

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Pituitary Liquid is indicated in surgical shock, intestinal paresis, uremic poisoning, protracted labor, and that vast array of diseases in which the Pituitary substance has been employed with marked success.

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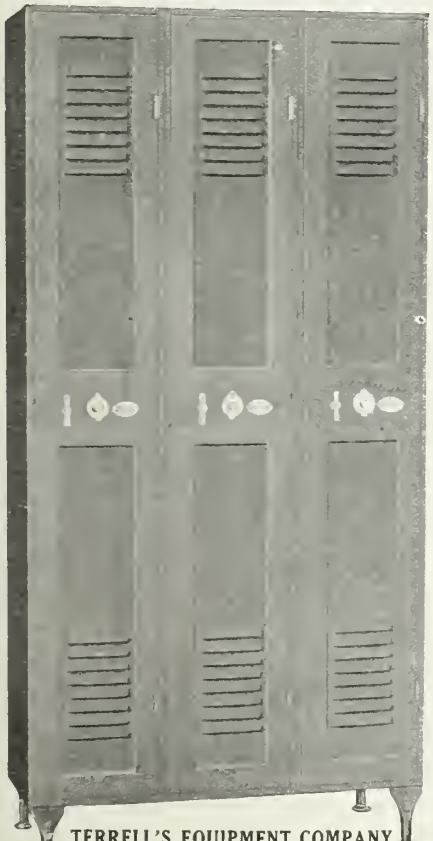

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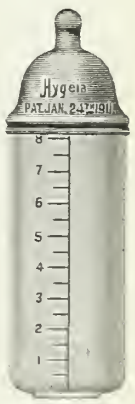

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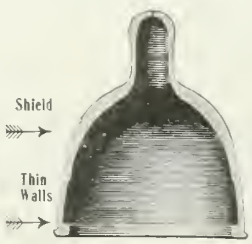

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NEWS *of the* HOSPITALS *and* SANATORIUMS

A $25,000 hospital is being built at Dennison, Ohio.

A $24,000 addition is being erected by the Columbia Hospital, Wilkinsburg, Pa.

Philadelphia's new $700,000 Home for the Indigent at Holmesburg has been completed.

A training school for nurses has been established by the Goshen (Ind.) Public Hospital.

Plans for a hospital to be built at Tucson, Ariz., for the Papago Indians are being prepared at Washington.

It is announced that the new building of the Twin City Hospital at Winston-Salem, N. C., will be opened to the public in October.

Miss Alma Murphy, formerly with the Wesley Hospital at Wichita, is superintendent of the new Mercy Hospital at Hutchinson, Kan.

The management of the Rolston Hospital at El Paso, Tex., has had plans drawn for a new four-story, fireproof building to cost $50,000.

Mercy Hospital, Chicago, will receive a bequest of $200,000, according to the terms of the will of the late Charles Haines, of St. Charles, Ill.

Rev. William Service Steen, for sixteen years superintendent of the Presbyterian Hospital at Philadelphia, is dead at the age of 73 years.

The new annex to the Helena Hospital at Helena, Ark., has been opened. It was built for negro patients only, and negro nurses are in attendance.

The board of supervisors of Oneida county, New York, has appropriated $35,000 for a nurses' home to be erected at the county hospital at Rome.

A campaign is being conducted by Bronson Hospital, Kalamazoo, Mich., for a fund of $150,000, with which to erect an addition said to be much needed.

Dr. C. W. Halterman is now superintendent of the Western (W. Va.) State Hospital, succeeding Dr. Steele, who has moved his family to Buckhannon.

Miss Agnes Cunningham, surgical nurse at the Kenosha Hospital, Kenosha, Wis., has resigned to accept a similar position at the German Hospital at Kansas City, Mo.

A society of American women organized in London after the war began has equipped a hospital and a hospital ferry, to be managed by the British Red Cross.

The Physicians and Surgeons' Hospital at Wilmington, Del., is building a three-story annex, which will provide space for 8 new beds in addition to other needed facilities.

Miss Jane B. Cross, of Phillipsburg, Pa., a graduate of the Jefferson Medical College, was recently elected superintendent of the Reading (Pa.) Hospital, succeeding Miss Margaret L. Kelly.

Two needed buildings will be added to the Western Kentucky Hospital at Hopkinsville this fall—a dining hall and a nurses' home. The dining hall will have a capacity of 920 patients at a time.

The Leo N. Levi Memorial Hospital recently erected at Hot Springs, Ark., at a cost of $80,000 will be opened in November, under the supervision of Miss Emma N. Olincy, of Venice, Cal. A training school will be maintained. Miss Olincy has for some time been connected with

Diphtheria Antitoxin Mulford

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Diphtheria Antitoxin has reduced the mortality of diphtheria from 40 percent to less than 10 percent.*

Diphtheria Antitoxin Laboratories.

This mortality may be still further reduced

By using Diphtheria Antitoxin earlier.

By giving larger doses—5,000 to 10,000 units.

By intravenous injections in severe or late treated cases.

The Time of Administering Antitoxin is Vital.—In the Philadelphia Hospital for Contagious Diseases, from 1904 to 1910, 256 diphtheria patients were treated on the **first day of the disease and all recovered.**

Patients treated on the **second day** the **mortality** was **5.4 percent.**

In those treated on and after the **third day** the mortality was much higher.

The early administration of Antitoxin is imperative.

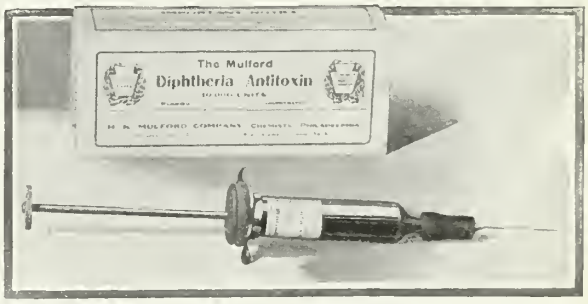
Larger Doses Are Necessary.—The object in administering Diphtheria Antitoxin is to neutralize, in the shortest possible time, the poison (toxin) circulating in the blood stream and tissue fluids. Dr. William H. Park advises 10,000 units in severe cases for little children, and 20,000 units in severe cases for adults. This is practiced in many leading hospitals.

Intravenous Injection.—No case should be considered hopeless. In malignant cases and late stages of diphtheria recovery may be brought about by the intravenous use of Antitoxin in large doses. The Antitoxin is thus carried directly into the circulation and its activity exerted at once, whereas, if given subcutaneously, only one-tenth of the amount reaches the blood stream at the end of 24 hours.

The importance of large doses is appreciated when we consider the impossibility of ascertaining the amount of toxin circulating in the patient's blood. The only safe rule is to give **sufficient antitoxin.** The giving of larger doses than are necessary does no harm; but an insufficient first dose, and in some cases the lack of intravenous injection, may be serious mistakes.

Diphtheria Antitoxin Mulford is accurately standardized and repeatedly tested. It is supplied in the Mulford aseptic antitoxin syringes, ready for immediate use, containing 1,000, 2,000, 3,000, 4,000, 5,000, 7,500, and 10,000 units.

Literature supplied on request.



Diphtheria Antitoxin Package.

*Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.8. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.

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the examining department of the New York State Board of Health.

The Christian Hospital at St. Louis has moved into its new quarters at Grand avenue and Palm street. The building has a capacity of 50 beds, and is said to be modernly equipped throughout.

The nurses' home of the Pittsburgh (Pa.) Hospital, Frankstown avenue, recently suffered damage by fire to the extent of about $5,000. Twelve girls were sleeping in the building, but escaped.

It is expected that the group of new buildings being erected for the Columbia Hospital for Women at Washington, D. C., at a cost of $300,000, will be ready for occupancy by the first of the year.

Dr. Simon F. Cox, who since 1906 has been superintendent of the Tuberculosis Hospital at Mattapan, near Boston, has accepted the position of superintendent of the New Haven Hospital at an increased salary.

Owing to the unsettled conditions due to the European war, the meeting of the Canadian Public Health Association, which had been set to be held in Fort William and Port Arthur September 10 to 13, was canceled.

Miss Helena I. Bedford, a graduate of the Nebraska University and the Johns Hopkins Hospital, of Baltimore, has been engaged to manage the Mary Lanning Memorial Hospital to be opened at Hastings, Neb., some time in October.

Dr. H. T. Summersgill, of New Haven, Conn., has been appointed superintendent of the hospital of the University of California Medical School. Six hundred and fifteen thousand dollars will be spent on new buildings for this hospital in the near future.

Vassar Hospital, Poughkeepsie, N. Y., is to be enlarged by the erection of a three-story addition, providing kitchens, dining rooms, etherizing rooms, dark rooms, examining rooms, sterilizing rooms, and a pathological laboratory. The cost is estimated at $40,000.

The will of George L. Thorndike, of East Boston, who died recently, left his entire savings, amounting to about $200,000, to build a hospital in memory of his brother, William H. Thorndike, who was visiting surgeon at the Boston City Hospital for twenty-five years.

A hospital which will be known as the Jennie Stuart Memorial has recently been completed at Hopkinsville, Ky. It is a gift to the city from Dr. E. S. Stuart. The building is a modern T-shaped brick and concrete structure, consisting of two stories and basement.

Mrs. Mae O. Franklin, of Seattle, Wash., has been appointed matron at the Riverview Hospital, Grand Rapids, Wis. Mrs. Franklin is a graduate of the Wisconsin Training School for Nurses at Milwaukee, and has had a number of years' experience in executive positions.

Both the Southwest and the Lake Superior regions are claiming the location of the national sanatorium to be established by the Moose fraternal order—the one on the strength of its warm, dry atmosphere, and the other because of its cool and invigorating climate.

Mr. Chas. McClelland, of Tabor, Ia., has purchased a residence at 3316 Farnham street, Omaha, Neb., and will turn it into a sanitarium and rest home to be conducted in connection with the Presbyterian Hospital at Omaha, this institution also being owned by Mr. McClelland.

Dr. J. W. Coon, of Milwaukee, has been made superintendent of the Chicago Municipal Tuberculosis Sanatorium. Dr. Coon was for a long time connected with the Milwaukee health department, and later he was superintendent of the state tuberculosis hospital at Wales, Wis.

Late reports from New Orleans indicate that the bubonic plague situation is well in hand, and that the number of patients in the isolation hospital is being gradually reduced. The war on rats continues. The total number of rats caught since the plague started exceeds 60,000.

Dr. Perry Nichols' sanatoriums at Savannah, Mo., and Hot Springs, S. D., have been taken over by a company incorporated at $500,000, of which it is assumed Dr. Nichols will be the head. The two institutions specialize in the treatment of cancer. One of the first moves of the

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Respectfully yours,

William Hamm M.D.
MEDICAL DIRECTOR

new organization will be the erection of a new home for the sanatorium at Savannah at a cost of $150,000.

Dr. G. W. Terril has established a sanatorium at Turners, Fla., on the upper Caloosahatchee river, and is laying out a health resort under the supervision of an expert landscape artist. The gardens will extend for nearly a mile along the winding Caloosahatchee, through a section noted for natural beauty.

The hospital erected at Rochelle, Ill., during the summer by Dr. A. W. Chandler has been opened. The building contains about fifty rooms and is modernly equipped. Dr. Chandler formerly conducted a hospital at Compton, Ill. He has just recently returned from a trip to Europe.

St. Luke's Hospital at Davenport, Ia., is to have a new $100,000 home. The building will be fireproof, and will have accommodations for nearly 100 more patients than can be housed at the present hospital, which was erected in 1895. The construction work will not be begun until spring.

A ship supplied by the Canadian Pacific Railway has been equipped for hospital service by the women of Canada, at an expense of $100,000, and presented to the British Government to be used in caring for wounded soldiers. The money was raised by public subscriptions from all parts of the dominion.

Miss Ellen Stirling, of Brooklyn, Ia., has been named superintendent of the Homeopathic Hospital of Iowa City, to succeed Miss Eva Parsons, who resigned to take a course in hospital management at Columbia University, New York. Miss Stirling has been in hospital work in Montana for several years.

The new plant for the public hospital at Troy, N. Y., on which work was begun in the fall of 1910, has been completed and is being occupied. The main building, 340 feet long, 75 feet high (five stories and basement), and 80 feet wide, is an imposing structure. It is of the block style of architecture and fireproof.

Dr. William H. Walsh has resigned his position as superintendent of the municipal contagious disease hospital at Philadelphia, to take charge of the new Children's Hospital of that city. Dr. Walsh will be succeeded at the contagious disease hospital, temporarily at least, by Dr. John E. B. Buckenham, first assistant resident physician under Dr. Walsh.

Dr. R. R. Harris, for the past three and a half years superintendent of Old Sanitarium at Prairie du Chien, Wisconsin, has retired from institution work to practice his profession at Dubuque. Dr. Harris was formerly associated with Dr. A. J. Ochsner, of Chicago, and for two later years was associated with Dr. J. R. Guthrie, dean of Iowa Medical College.

Mrs. Helen de Spelder-Moore, for the last five years superintendent of the Kenosha Hospital, Kenosha, Wis., has tendered her resignation. She will be succeeded by Miss H. J. Robinson, of the Illinois Training School. During Mrs. Moore's incumbency a 60-bed building, costing approximately $110,000, has been erected, and the training school for nurses reorganized.

Because of the pressing need for more accommodations for the insane of the state, awaiting the completion of the hospital now in course of construction at Upper Alton, the Illinois State Board of Administration is planning the erection of an annex to the state hospital for the insane at Kankakee. Illinois is said to have over 15,000 insane persons in her state hospitals.

Ella Wheeler Wilcox, in a syndicated article published recently, declares that no more money should be sent from the United States to foreign missions until every town of 10,000 population and over in this country can offer free hospital accommodations to those who need them. "Private homes," the writer asserts, "unless they are homes of large wealth, are not places for sick people."

Snowdon Ashford, municipal architect of Washington, D. C., is preparing preliminary sketches for a municipal hospital to be erected at Fourteenth and Upshur streets, northwest. Congress appropriated $15,000 for plans for the institution, but made no reference to the amount that may be spent on the building. It is expected, however, that when the tentative plans indicating the size, scope, char-

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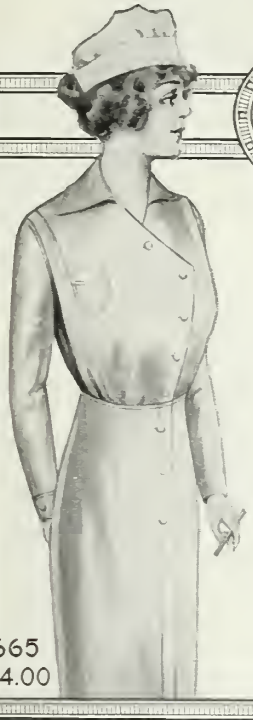

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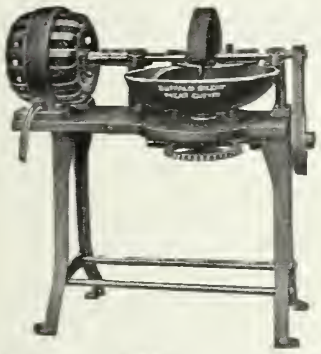

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It chops beef fine, saves the juice, and preserves all the nutritive and digestive qualities.

Most valuable machine for any hospital kitchen. Cuts fine raw meats, cooked meats, and vegetables in TWO minutes.

Worth investigating. Will ship on 30 days' trial.

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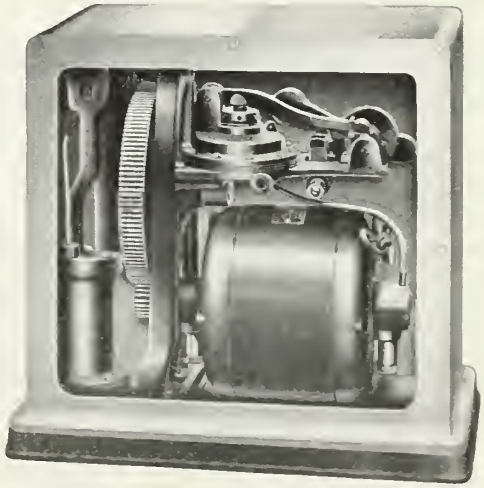

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acter of building, etc., have been decided on by the board of charities, the necessary funds will be asked for and granted.

Dr. Isaac A. Abt, professor of pediatrics in Northwestern University at Chicago, declared on his return from Berlin a few weeks ago that the European war will retard the advance of medical science for years. "Most of the foremost scientists of the world," said Dr. Abt, "were compelled to drop their work and go to the front. No one knows whether they will ever be able to resume it."

The Pennsylvania Orthopedic Institute and School of Mechano-Therapy, associated with the Bushhill Sanatorium, 1709 Green street, Philadelphia, is erecting a new wing to its present hospital at a cost of $20,000. The building will contain twelve additional private rooms, an electrical and x-ray department, radioactive bath, mud bath, two wards, a maternity room, and a solarium.

A charter has been secured at Sherman, Tex., for a branch of the Battle Creek (Mich.) Sanatorium. The institution was secured through the efforts of the Sherman Chamber of Commerce. Seventy-five thousand dollars will be expended on buildings. Local physicians and business men constitute the board of directors. A training school for nurses will be conducted in connection with the sanatorium.

A commission to investigate the problem of the feebleminded in New York has been recently appointed by Governor Glynn. Members of the commission will give their services gratis. A report from them will be submitted before February 15, 1915, with legislative recommendations. It is asserted that, although there are now about 30,000 feeble-minded citizens in New York, accommodation is provided for about 4,000.

At a recent meeting of prominent Baptists in Shreveport, La., plans were formulated for the construction of a Baptist sanatorium in that city. The institution will be known as the Louisiana Baptist Sanitarium, and will be financed by an incorporated concern capitalized at $300,000. While the ownership and control of the institution will be denominational, it will be open to the general public. A provision in the charter calls for the establishment of a training school for nurses.

The New York County Registered Nurses' Association announces through the central registry an hourly nursing service for those requiring the skilled attention of a trained nurse to administer certain necessary parts of the treatment, but who do not need to go to a hospital or have the constant care of a trained attendant. The low price of the charge, 75 cents per hour, makes it certain that the innovation will meet with hearty welcome from both physicians and patients.

The State Civil Service Commission of Illinois has taken a step which will greatly facilitate the taking of examinations for hospital positions, so far as the applicant is concerned. Heretofore the method has been to hold examinations once a month at a few of the larger towns of the state. Under the new arrangement those desiring to take the examinations may do so in their home town or, at the worst, at their county seat, under local physicians designated by the commission.

The $75,000 sanatorium being erected at El Paso, Tex., by Dr. E. M. Hendricks, of El Paso, and R. D. Harvey, of Cleveland, Ohio, will be of fireproof construction and contain fifty-three rooms, together with as many sleeping porches. It will be constructed of hollow tile, and, according to the builders, will be as nearly perfect in sanitation and comfort as it is possible to make it. The building will measure 220x60 feet, and will have a kitchen and dining room located in a separate wing.

Miss Katherine F. Coots, a trained nurse, who has had several years' experience in New York hospitals and has made a special study of pulmonary diseases, has opened near Stanhope, N. J., forty-seven miles from New York, what is said to be the first private tuberculosis sanatorium ever licensed in New Jersey. Dr. Britton D. Evans, medical director of the New Jersey State Hospital at Morris Plains, is an active supporter of the project and chairman of the board of governors. Miss Coots recites many difficulties in finding a community in which the inhabitants were not strongly opposed to the establishment in their midst of an institution for the treatment of tuberculosis,

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The gas is generated in a state of greatest insecticidal and germicidal power — **500 to 800 times more concentrated than with the ordinary apparatus** — destroying all bacteria and parasites in 15 minutes.

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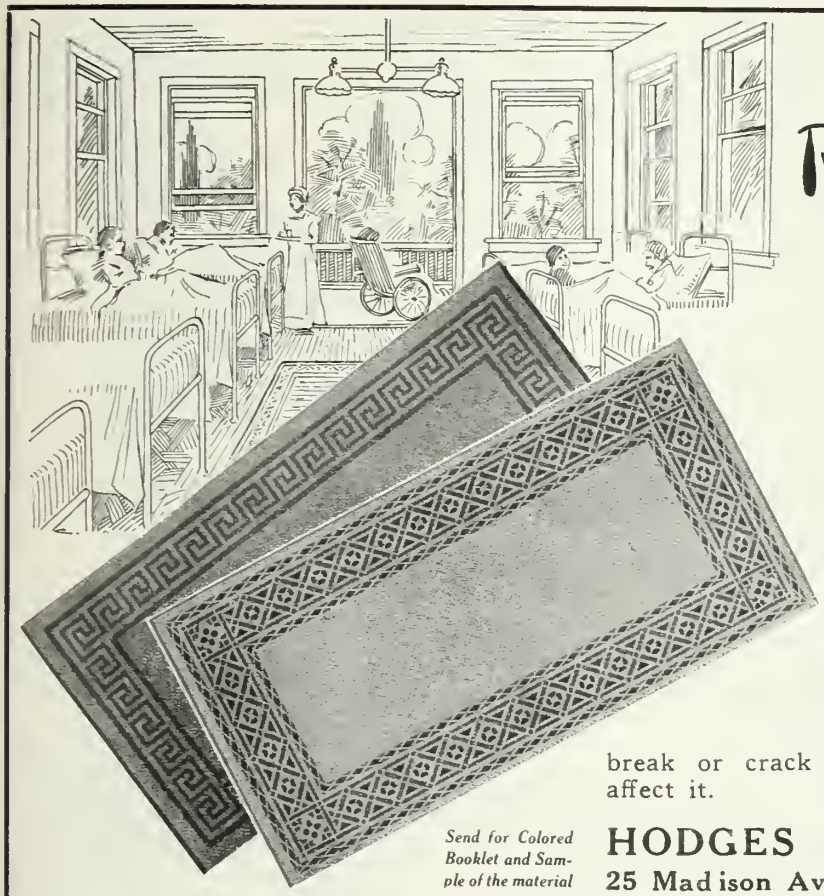

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and says that it was only by persistent efforts extending over a period of four years and a campaign of education that a suitable location was finally secured. In New Jersey the authority to license such institutions is vested in the State Board of Health, and when protests are received the board usually holds public hearings before giving a decision.

An organization in the eastern district of Brooklyn, N. Y., styling itself the Williamsburg Hebrew Hospital Society, is raising funds for the establishment of a hospital which will maintain a kosher kitchen. Those active in the movement complain that the kitchen of the present Jewish Hospital is too freely managed, and it is the purpose of the society to build a hospital in which everything will be done in a way to satisfy the pious Jew, whose convictions, it is asserted, have thus far been disregarded.

The committee appointed at the request of the New York board of health to prevent the spread of vaginitis and infectious diseases, submitted recommendations which, if carried out, must prove effectual in eradicating a disease common among day nursery patients. The rules will require the attendance of a licensed physician to make systematic examination of every regularly attending child at least every alternate week. New applicants are to be admitted only on the physician's certificate that they are free from contagious or infectious diseases.

The escape of five lepers from the Los Angeles County Hospital will be made a subject of grand jury investigation, according to the county health commissioner, Dr. E. O. Sawyer. One Japanese and four Mexican lepers escaped during the months of April and June, owing, it is claimed, to the lack of proper supervision. There are now four lepers in the hospital colony, but it is said to be impossible to exercise proper supervision over them. Recent occurrences such as this are deemed additional reason for the establishment of a national leprosarium.

Nurses and attendants of the Illinois State hospitals at Dunning, Elgin, and Kankakee have organized labor unions and are demanding better working conditions, higher salaries, etc. Their formal demands are a maximum salary of $50 a month, with a minimum of $30, eight hours straight duty per day, with one whole day off in seven, and no docking of wages in case of sickness. The present maximum salary is $45. The state board of administration claims that everything is being done for the employees of the state institutions that existing appropriations will permit.

A field hospital for the treatment of pellagra has been established at Spartanburg by the federal Government. Past Assistant Surgeon R. H. Herring will be in charge. This hospital is supposed to be only temporary, as there is a bill before Congress providing an appropriation of 300,000 for the establishment of a more pretentious institution at Spartanburg for this purpose. Although practically unknown in that section of the country twenty years ago, pellagra is said to be becoming one of the most difficult diseases to contend with, especially in view of the fact that no certain cure has been discovered.

For the last month or two there has been considerable friction at the Cincinnati General Hospital between Dr. Chas. F. Sanborn, the superintendent, and his subordinates. Charges and counter charges have been made, and an investigation held without any finding being made public. Dr. Sanborn has resigned. Dr. A. C. Bachmeyer, superintendent of the city tuberculosis sanatorium, is said to be slated for Dr. Sanborn's place, and it is reported that Dr. Walter List, assistant superintendent under Dr. Sanborn, will succeed Dr. Bachmeyer at the sanatorium. Dr. Sanborn went to the Cincinnati Hospital several months ago from Chicago.

The new Jewish Home for Chronic Invalids at St. Louis consist of a plant of four buildings of the latest hospital type, a main or administration building, a cottage for tubercular men, a cottage for tubercular women, and a pavilion for advanced tubercular patients. In the main building ramps have been substituted for interior stairways. In the pavilion for advanced tubercular patients, known as the Schoenberg Memorial, all the rooms are open-air rooms, with means of closing by glass in case of snow or rain. A tunnel connects the building with the administration building. The plant cost approximately $100,000. It was designed to care for 100 patients. Dr. Milton

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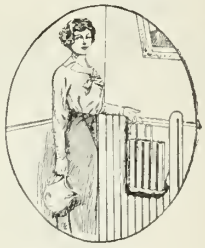

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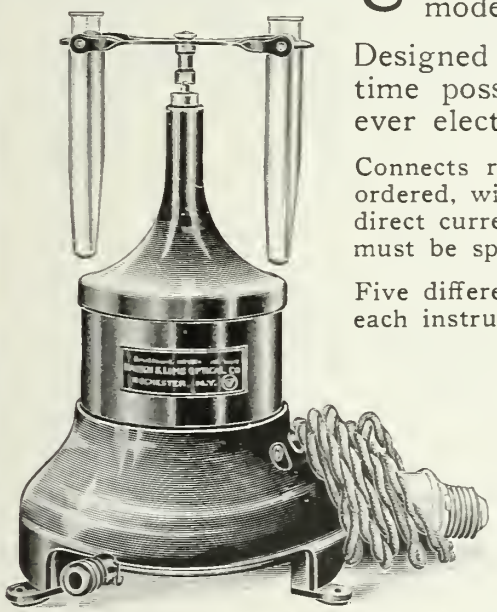

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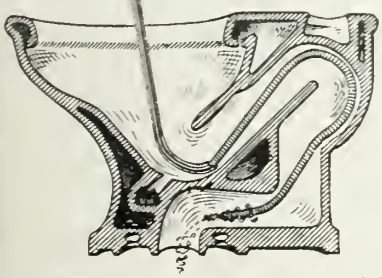

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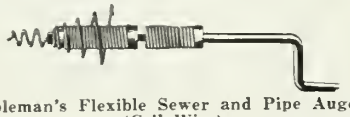

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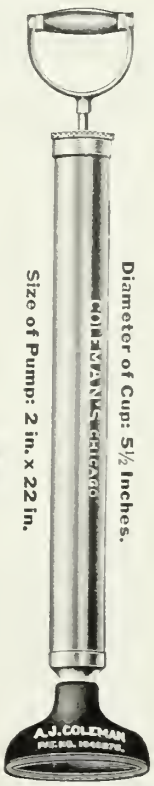

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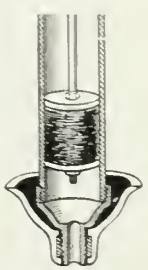
Diameter, 2 inches: length 22 inches.

Extra cups, $1.00.



Sectional view, with cup reversed for open drains.

Allan J. Coleman, Patentee and Manufacturer, 166 N. Michigan Ave., CHICAGO, ILL.

Schaie, formerly assistant superintendent of the Montefiore Home County Sanatorium, Bedford Hills, N. Y., in the medical director. Miss E. S. Kaplan, formerly head nurse of the National Jewish Hospital at Denver, Colo., is the superintendent.

The handsome new home of Washington University Medical School at St. Louis was opened in September. It is one of a group of medical and hospital buildings recently erected on Euclid avenue, near Forest Park boulevard, at a cost of $2,000,000. The group includes the Barnes Hospital, which, though under the control of the Methodist Episcopal Church, South, is affiliated with Washington University, as is also the new building of the St. Louis Children's Hospital. The Barnes Hospital will be occupied late in October and the new Children's Hospital about December 1st.

An additional burden has been imposed on the charities of the state of New York because of the European war. Heretofore the state hospital commission has lessened the number of state charges by deporting the alien insane, the average of such deportation for the past three years being 750 per annum. This avenue of relief has now been entirely closed, and the commission has already been notified that it must arrange to receive patients which had been accepted by foreign steamship companies as appropriate for deportation at their own expense. The annual cost of maintenance is $204 per capita.

Following the English custom of setting aside one day in each month when everybody is asked to contribute a small sum for the support of hospitals, the Talent Workers, a benevolent society of San Diego, Cal., have set a day on which everybody in San Diego will be asked to contribute five cents toward a fund for the erection of a hospital planned by the society. The purpose of the Talent Workers is to establish a hospital at which patients will be charged according to what they are able to pay, by which method it is believed that the pauperization of persons of limited means may be prevented.

Nearly a hundred nurses attended the convention of the Graduate Nurses' Association of West Virginia held at Wheeling September 2, 3, and 4. Officers for the ensuing year were elected as follows: President, Mrs. H. C. Lounsberry, Charleston; first vice-president, Mrs. Susan Cook, Bridgeport; second vice-president, Katherine Moriarity, Wellsburg; secretary-treasurer, Mrs. R. J. Bullard, Jr., Martin's Ferry. Mrs. H. C. Lounsberry was elected delegate to the convention of the American Nurses' Association to be held at San Francisco next year. The city of Elkins was chosen for the 1915 meeting of the West Virginia nurses.

The tuberculosis hospital being erected by the city of Pittsburgh, Pa., is of brick and fireproof construction throughout. The floors of the pavilions are of cement. The hospital consists of an administration building and a service building, flanked by a pavilion on each side. Each pavilion contains two wards, one on the first and the other on the second floor, and each ward will have a capacity of 25 patients. Each of the four wards will have four separate rooms for the care of advanced cases. The equipment of the administration and service buildings have been designed to care for 500 patients. It is planned to maintain a dairy and a chicken farm at the new hosptal.

Owing to the growth of the Samaritan Hospital at Brooklyn, N. Y., it has become necessary to provide greater facilities, and the board of trustees contemplates the erection of a larger building in the near future. The institution, which is now situated at Fourth avenue and Seventeenth street, was started as a dispensary of the Fifteenth Street Baptist Church in 1901. It was incorporated in 1904, and since that time 30,000 persons have received treatment. Although under the direction of members of the Baptist church of Brooklyn, it is not a sectarian institution. During the last year 949 patients were treated, with a death rate of 4 percent. More than 600 operations were performed.

Dr. A. L. Skoog, a professor of neurology in the University of Kansas and a practitioner in Kansas City, now in Paris, France, has had honors thrust on him, as it were. Early last spring Dr. Skoog went to Paris to take a post-graduate course in the LaPetrie Hospital and re-

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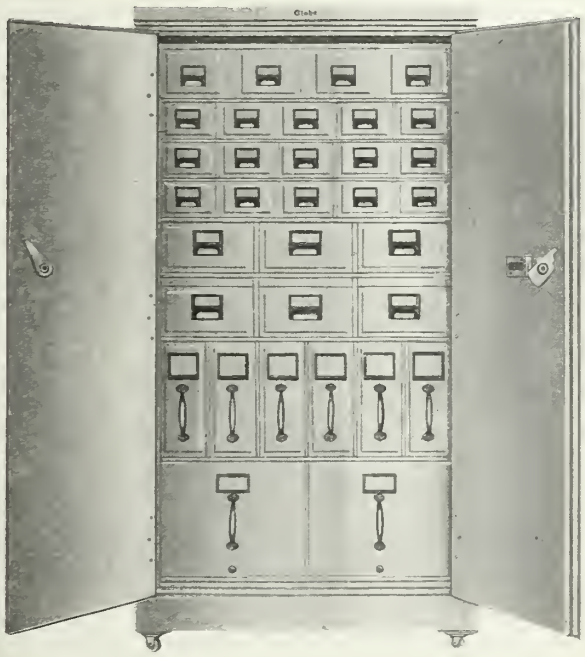

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CINCINNATI, OHIO

mained there throughout the summer. When the war began, practically the entire staff of the institution enlisted for field service and Dr. Skoog was asked to assume charge temporarily. The sudden turn of events caused him to postpone his return to his chair in the university and to his practice.

The next step in the campaign to check tuberculosis in Ohio will be directed toward obtaining adequate hospital facilities for the 35,000 residents of the state who, according to statistics, now are suffering. This has been definitely decided on by joint representatives of the Ohio Society for the Prevention of Tuberculosis and the division of tuberculosis under the state board of health. Robert G. Paterson, director of the division, working with representatives of the Ohio society, has outlined twelve tentative hospital districts, of from four to six counties each, wherein campaigns will be inaugurated for the erection of district tuberculosis hospitals to be maintained jointly by the cooperating counties. Through the erection of these twelve district hospitals, supplementing the present sanatoriums, anti-tuberculosis workers believe that the 35,000 victims will be adequately cared for and that the people of the state will be so well protected through this hospitalization that eventually Ohio's death rate of 7,000 per year will be reducted materially.

Nearly every hospital in England has offered beds for wounded soldiers, and literally hundreds of palaces and fine residences have been offered to the Government as temporary hospitals. The war office has turned the whole hospital matter over to the British Red Cross Society, which is made a clearing house for the wounded. The society has accepted beds, running from 250 in the London Hospital down to a very few in remote country institutions, and it is intended to make use of these latter for convalescents. Nearly all interns and hospital resident physicians have gone with the colors, and thousands of nurses who were on reserve to the Red Cross are also in France and Belgium serving in field hospitals, leaving home hospitals with a great scarcity. In Vienna and Berlin the pressure for military surgeons has depleted the hospitals of their regular staffs, and in a number of instances American specialists who were in those cities pursuing special studies have been appointed to act as superintendents and surgeons. Some of these Americans have volunteered for field service and are now at the front.

The Clinton (Ia.) *Herald* announces that the isolation hospital being erected by that city has been completed, with the exception of the plumbing and painting. The following description of the building is given: The hospital is entered through a vestibule, leading to a corridor. Over the entrance is a plain stone, bearing the words, "Isolation Hospital," set in the red brick used in the construction of the building. Concrete steps lead to the entrance. Throughout the exterior the construction is plain, with all casings closely set to facilitate fumigation and prevent the escape of disease germs. To the left of the vestibule is the doctors' room, where the physicians may change their clothing before entering the hospital proper and again change their clothing and disinfect themselves before leaving the building. On the right of the corridor is the nurses' room, with a bath attached, while next in line is a bath room for the patients, a germproof cabinet for medicines, and supplies filling an interstice. A diet kitchen is next, fitted with refrigerator to be filled from the outside. At the rear of the corridor on the right is a patients' room, while three other rooms for patients are on the left side of the corridor, with a fumigation room, opening into the basement entrance, which also has an outside door. The rooms for patients are fitted with windows on the corridor side, so that the nurse may look in and view the needs of the patient without entering the room. Patent flooring and baseboards are used, all germproof, while the plaster walls are backed with plaster board. Each room is ventilated by both an inside and outside system of ventilation, and the building will be heated with steam, the steam plant being located in the basement. The electrical switches for the lights in the rooms are all located in the corridor, so the nurses may switch on the light and look through the window into the room. Each room also has one or more outside windows, and is equipped with electric call bells. Electric fuse boxes and meters will be on a pole outside the building, making readings and repairs possible without entering the building.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, ana Aaministration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. III *November, 1914* No. 5

AN INSURANCE COMPANY SEEKING TO IMPROVE INDIVIDUAL AND PUBLIC HEALTH.

Visiting Nursing Service—Publication of Health Literature—Health Campaigns Supported—Education by Exhibits—"Health and Happiness League" Inaugurated—Home Building Financed—Looking for Farther Fields.

By LEE K. FRANKEL,

SIXTH VICE-PRESIDENT METROPOLITAN LIFE INSURANCE COMPANY.

REALIZING that an army of 13,000 agents calling on 10,000,000 policyholders weekly could be of great assistance in promoting individual and public health, the Metropolitan Life Insurance Company began its campaign of education in 1908. Since that time the Welfare Department of the company has grown rapidly, and its activities today cover almost all cities and towns in the United States and Canada.

The efforts of the company have been threefold: first, the improvement of individual health through educational leaflets and pamphlets distributed by the agents; second, a visiting nurse service to its industrial policyholders; third, the improvement of general health conditions through cooperation with health officers in clean-up, fly-swatting, and other campaigns, through assisting them in enforcing housing ordinances, and by the enlistment of public support for general and special health movements.

VISITING NURSE SERVICE.

The visiting nurse service today covers over 1,700 cities and towns in the United States and Canada. The figures of this service on December 1, 1913, for the year ending November 30 were as follows:

Number of cities and towns in which the nursing service was installed November 30	1,652
Increase	284
Number of patients under care of nurses	175,757
Number of visits made	1,127,022
Cost of nurses' visits	$525,488.71
Cost per visit	$0.46
Number of visits per patient	6.4

The total cost of the visiting nurse service in 1913 was $553,166.02. It is estimated that this service covers 9,000,000 people.

The company affiliates, wherever possible, with existing agencies in the various cities and towns. A large percentage of the nursing is in the hands of organized visiting nurse societies. In some cases the cooperation of hospitals has been sought, and in these instances the hospital gives visiting nurse service for the policyholders. Where it has been impossible to effect affiliation with existing agencies, the company has employed its own nurses.

During the last year efforts have been made to improve the character of the service. At the home office careful study is made of the work done by individual nurses to determine whether they are competent. In addition to the home office supervision, field supervisors are employed. These field supervisors, traveling from town to town, go with the nurse on her visits and seek to improve her service by encouragement and by example. The purpose of the company and its attitude are explained. A powerful *esprit de corps* is being developed.

PUBLICATIONS.

In addition to the education given to sick policyholders by the visiting nurse, the company seeks to educate in matters of health by means of leaflets and pamphlets. These are written in very simple language, and are published in various foreign languages as well as in English. A large

Fig. 1. How long shall we eat together? (After the State Board of Health, North Carolina.) (Six hundred thousand of these circulars in English and French were issued.)

number of these pamphlets have been circulated, as can be seen by the following figures:

"Fake Consumption Cures"	500,000
"A War Upon Consumption"	over 5,000,000
"Directions for Living and Sleeping in the Open Air"	200,000
"The Child" (English)	1,750,000
"The Child" (Foreign)	650,000
"Teeth, Tonsils, and Adenoids" (English)	2,000,000
"Teeth, Tonsils, and Adenoids" (Foreign)	500,000
"The Health of the Worker" (English)	1,000,000
"The Health of the Worker" (French)	100,000
"Smallpox and Its Prevention" (English)	500,000
"Smallpox and Its Prevention" (French)	100,000
"Typhoid Fever and How to Prevent It" (English)	500,000
"Typhoid Fever and How to Prevent It" (French)	100,000
"A Magic Book of Health Rules" (for Health and Happiness League Members only)	90,000
"Welfare Work Conducted for Policyholders"	300,000
"Welfare Work Among Employees"	100,000
"Visiting Nurse Service"	300,000
"Some Facts About Scarlet Fever"	500,000
Baby Circular	5,000,000
"From Flies and Filth and Fever to Food" (circular)	500,000
"A Day in the Life of a Fly" (circular)	5,000,000
"Dirty and Clean Milk" (circular)	5,000,000
"If You Had Consumption" (circular)	500,000
Shack circular	200,000
Health campaign circular	1,250,000
City clean-up campaign circular	1,250,000
Folding cups	1,100,000
Paper drinking cups	12,000,000

The following new publications have just been published, or are at present being prepared and are now on the press: "First Aid in the Home," by Major Charles Lynch, of the Medical Corps of the United States Army; "All About Milk," by Dr. Milton J. Rosenau, professor of preventive medicine at Harvard University; "Help and Hints for Tuberculosis Patients."

HEALTH CAMPAIGNS.

Cooperation with health authorities has been sought and has been effected in many instances. Although final figures for the present year are not yet obtainable, the company cooperated in over 140 cities by the distribution of literature and by urging policyholders to enter into clean-up campaigns. In many instances the planning of such campaigns was suggested to the health officers by the company's superintendents.

Through cooperation with certain welfare organizations, health bureaus, etc., special circulars have been prepared and distributed among our policyholders. In the city of St. Louis there were distributed 100,000 copies of a specially prepared circular in order to bring home forcibly to policyholders the merits of the new tenement house law. The tenants' rights under the law were especially emphasized in this circular. Of the violations of the tenement house law reported to the Department of Health, a large number were the result of the distribution of the company's circulars.

Plans are at present being completed for still further cooperation with health officers. Letters have been sent to health officers in cities having a population of 20,000 and over, offering the services of our agents in the distribution of literature to policyholders in any campaign conducted for the improvement of the health conditions in their respective communities. We are confident that through the machinery of the company and through its contractual relations with our policyholders, which permit our agents to enter the homes of our policyholders weekly, we can be of great service to health officers in educating the masses of their citizens in the health programs which they may have under way. Our offer of assistance has recommended itself to health officers, and the company has been fortunate in having been able to cooperate, in addition to the above, in campaigns for increased facilities for

A B C

Fig. 2. A, consumptive spitting on floor; flies feeding on it, carry the germs of the disease to food. B, the spit dries and careless sweeping, dusting, or draught cause the germs to float in the air. C, the germs may enter the bodies of children, playing on the floor, through sores or wounds.

contagious disease hospitals, for new tuberculosis sanatoriums, and for the enforcement of health ordinances.

In cooperation with the National Association for the Study and Prevention of Tuberculosis, the

HAVING HAD A GOOD NIGHTS SLEEP IN AN OLD GARBAGE CAN I BREAKFAST AND AWAY-
TO A BAKERY WHERE I HAVE SOME DESSERT
TAKE A DRINK AT A POOL IN THE GUTTER
LIGHT ON A HORSES FACE FOR A RIDE
GO FOR A WALK AROUND THE EDGE OF A DRINKING GLASS
SEE AN OLD STABLE DOOR OPEN
FIND A DOG ASLEEP AND TEASE HIM A WHILE
GO IN A WINDOW IN A NICE LOOKING HOUSE
AND FIND THE TABLE ALL READY FOR DINNER
'LIGHT ON THE BABY'S BOTTLE FOR A SIP OF MILK
CRAWL AROUND THE BABY'S FACE FIND IT VERY SWEET
PASSING BY A FEW DAYS LATER NOTICE A WHITE RIBBON ON THEIR FRONT DOOR

Fig. 3. A day in the life of a fly. (Five million of these circulars were issued.)

company printed 350,000 copies of a circular entitled, "If You Had Consumption, What Would You Do?" for distribution in the churches in the United States on Tuberculosis Day, December 7, 1913. Requests for these came from various tuberculosis associations throughout the United States and from ministers to whom the national association had written, advising them that the circulars could be obtained from us. A large number of these circulars were also distributed in moving picture theaters in connection with films shown on the subject.

Fig. 4. Views showing instances of dirty milk (on the left) and clean milk (on the right). (Five million of these circulars were issued.)

EDUCATION BY EXHIBITS.

The company holds exhibits at county fairs and a number of special exhibits in large cities. In 1913 the total number of exhibits held was nearly one hundred. Printed welfare charts have been distributed to about one hundred district superintendents, who have exhibited them in store windows and school buildings, at local exhibits, etc. Our correspondence shows that these charts have been very favorably received. They are neat in appearance and inexpensive in construction, yet serve a very useful purpose in acquainting the public with the welfare work of the company on a large scale. It is our purpose to supply each of the superintendents with at least four charts during the next few months, to be kept permanently at the district offices for use on various occasions, such as county fairs, local exhibitions, etc.

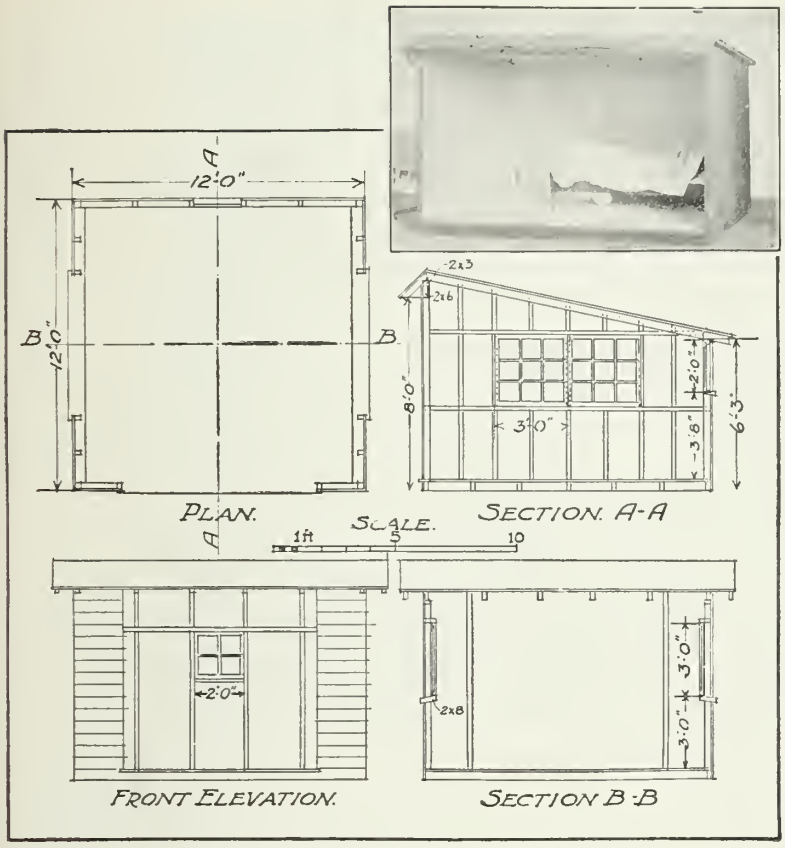

Fig. 5. Living and sleeping in the open air. Front view, floor plan, and elevations of a shack for flat roofs.

HEALTH AND HAPPINESS LEAGUE.

During the past months an experiment has been made in certain cities and towns in New Jersey to determine the effect of extension work to organize our boy and girl policyholders. In each community the children have been brought together in our offices and a juvenile municipality has been formed. The officers and members of the juvenile municipality cooperate with the various city officials in reporting violations of city ordinances, in keeping the streets clean, and in such other civic duties as can be undertaken by the boys and girls. In each municipality the boys and girls have been offered the opportunity of joining hiking clubs, the Boy Scouts, the Camp Fire Girls, nursing clubs, etc. The last-named in particular, conducted by our nurses in their respective towns, have been especially helpful in educating the girls in the rudiments of home nursing and in the preparation of food for the sick. The results thus far obtained justify an extension of the experiment to other cities and towns.

HOME BUILDING.

In addition to these efforts for improving public health, the company has begun an experiment to secure for workingmen inexpensive but good houses. The experiment which was begun in 1911, under which the company loaned approximately $650,000 for the erection of small homes in the Borough of Brooklyn, was extended during the past year through a loan, amounting to $86,000, made to the Goodyear Tire and Rubber Company for the erection of homes at Goodyear Heights, a suburb of Akron, Ohio. The plan differs from the Brooklyn plan in a number of respects. The company requires no initial payment, and charges its workmen for whom the houses have been erected 25 percent above the actual cost price. The 25 percent, plus accumulated interest, is repaid to the employee at the end of five years, so that at the end of fifteen years he is the owner of his home and has obtained it at cost.

WHAT DO THESE EFFORTS MEAN TO THE HOSPITAL WORKER?

How do these efforts of the Metropolitan Life Insurance Company to secure improved health conditions in the various communities and to free the lives of policyholders from unnecessary sickness react on workers in the hospital field? It means that if these efforts, covering, as they do, almost one out of every ten persons in the United States and Canada, succeed in preaching the lessons of good health, the strain which in the past has been put on all general hospitals should be relieved. It should be possible for them to devote more of their time and energy to the treatment of special infections and an ever-increasing portion of their energy to laboratory research looking toward the elimination of disease. It

Fig. 6. Granite worker using a sand blast—one of the conditions likely to cause tuberculosis. (One million one hundred thousand of these circulars in English and French were issued.)

Fig. 7. Three children brought with their mother, who had smallpox, to detention hospital. The center child was unvaccinated; the other two were vaccinated a year before and remained perfectly well. (Six hundred thousand of these circulars in English and French were issued.)

should mean, moreover, that the hospital would not only be relieved of the large number of individual cases, but that those cases requiring hospital care would receive this in the early stages of the disease, and in this way the number of chronic cases in hospital wards would be largely reduced.

With the assistance of the visiting nurse service and the emphasis of the pamphlets on prevention rather than cure, it does not seem an unobtainable end that all policyholders requiring hospital care will obtain this in the early and less dangerous period of their illnesses.

The Metropolitan Life Insurance Company does not feel that it has as yet availed itself of all of its possibilities. It seeks to be of assistance whenever and wherever it can. It calls on physicians and hospital workers throughout the country to suggest to it new lines and new developments to which it may devote its energy.

HOSPITAL RECORDS.[1]

Accuracy and Completeness Absolutely Necessary—Must Be Made by Responsible Persons—Fire Protection Must Be Considered in Storing—Dampness Tends to Disintegration—Typewritten Records Are Best.

By JOSEPH B. HOWLAND,

ASSISTANT ADMINISTRATOR MASSACHUSETTS GENERAL HOSPITAL.

IT IS not the object of this paper to describe a complete system of keeping hospital records. Articles by Myers[2] and Hollings[3] deal fully with the system at present in use at the Massachusetts General Hospital. The following is intended to bring out some practical points in the handling of hospital records which the writer hopes may be of interest to the members of the association.

No hospital administrator can be said to have done his full duty unless he has endeavored to see that the clinical records made during his superintendency fulfill certain requirements—namely:

1. That no incomplete record be filed.
2. That the form of record be one possible to keep intact, yet available for frequent reference.
3. That the paper, ink, and binding be of such quality that the records may be durable.
4. That safe and suitable storage may be provided so that records will be protected from fires, loss by theft or carelessness, and from disintegration.

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

[2]Care of Hospital Records According to the Method of the Massachusetts General Hospital, Boston, Mass., by Mrs. Grace W. Myers; International Hospital Record, 1911.

[3]Record Keeping at the Massachusetts General Hospital, by Byam Hollings, M. D.; THE MODERN HOSPITAL, February, 1914, Vol. II, No. 2.

No hospital record is complete unless every effort is made to incorporate into it data which will allow one to follow up the patient after he has left the hospital, for in these days, when hospitals are being tested for their efficiency, it is not enough to call the record complete when the patient is discharged. He must be followed up for one or more years to ascertain if the diagnosis was correct or the treatment successful. In the ordinary charity hospital admitting a foreign population, which is difficult to trace, the utmost care is needed to obtain the correct, complete name and address of the patient, of one or more relatives or friends (remembering that it will be much easier to trace a person who is in business for himself than a laborer, mechanic, etc., who may be constantly changing residence), and the name and address of the physician referring the patient to the hospital. Since care has been given to these details at the Massachusetts General Hospital, we find that we can trace a much larger proportion of our patients after one or more years. At present we reach an average of 70 percent in looking up groups of cases. We do not stop tracing a patient if we fail to locate him through relative, friend, or family physician. We use directories, write to postmasters and keepers of vital statistics, etc. It is expensive, but I think worth while. I wish here to give credit to Dr. E. A. Codman, formerly of the surgical staff of the Massachusetts General Hospital, for suggestions and funds to increase our efficiency in this direction.

The omission of an initial, age, or street number may be sufficient to render the tracing of a former patient impossible, and thereby limiting research work. The record of data I have mentioned must not be left to any one of several people in a hospital. It should always be done by someone who understands the importance of accuracy and who has been instructed in the proper procedure, and may be held responsible for inaccuracies. If the admitting officer is an assistant superintendent, his record should be considered as correct; if an admission blank is filled out by any other person, such as ambulance driver, orderly, clerk, etc., such blanks should be verified by some one employed for that purpose, and, when verified, stamped "correct." It is imperative that, after an admission blank is stamped "correct," it be considered the official record from which nurses must fill in charts, clerks enter data in the hospital register, and interns write patient's name in histories. I have seen a patient's admission slip filled out by a ward tender in the emergency ward, a chart sheet filled out by a nurse, and a history written by an intern all on the same case, and no two of these records identical as to spelling of name or of residence given.

Provision is made that, if it can be shown that an error has been made by the clerk who corrects the admission blank, notice must be sent to the admitting office, so that all entries of the error may be corrected. As soon as the patient leaves the hospital, or on a given day of the week, all histories of discharged patients should be sent to the record room.

It is the duty of the librarian to read all records and note the following: that if an operation in a surgical case involves a right or left organ, this be stated; that a record of the suture material used in an operation be mentioned; that notes be complete up to the day of discharge.

In accident cases, record writers should not be allowed to give a lengthy statement of how the accident occurred, giving details of who was at fault, etc. That is a matter for the courts to decide if such cases come to trial later, as they frequently do. The wording of the history should not be a record of the slang of the day, nor should foolish or "smart" language be permitted. I have been ashamed more than once, when it was too late, to have records read in court where the patient could hear what was written. I have known of a record being refused admission to court where the house officer writing it had already tried the case. The best remedy for correcting these faults is to require such records to be rewritten. House officers do not like to write records any too well, and, if they are made to rewrite one or two such records, the practice becomes unpopular.

It is very desirable to have visiting physicians and surgeons go over each record before it is sent to the library for filing, if they can be induced to do it, but in my experience, while such may be the rule of the hospital, it is impossible to enforce it.

LOOSE LEAF OR BOUND RECORDS.

What system shall we use for filing records? I assume that the practice of writing clinical histories in bound books is no longer used. Having had experience with both loose leaf records in folders and loose leaf records finally bound, I do not hesitate to recommend the latter. In some hospitals, only one record of a patient is kept—loose leaves in a folder, which permits additions to the record as occasion may arise, perhaps on several reentries into the hospital. I do not believe that loose leaf records can always be kept intact if they are used as much as they should be. At the Massachusetts General Hospital we do not permit a record to be taken from the library while in loose leaf form. There may be an advantage in having a patient's history filed in a single folder

in case of one or more reentries into the hospital, but in my opinion this slight advantage is much outweighed by the certainty of always having a complete record if bound. Here I may mention another point of importance, that of eliminating the common practice of gluing small papers into a volume of records—I refer to pathological reports, consultations, x-ray reports, etc. These should always be made on forms prepared for the purpose, of the same width as the regular history paper, and bound with the rest of the history. They need not be full-length sheets.

Let us consider the materials that are to make up our records. As I said at the beginning, it is our duty to make our records as nearly permanent as possible, and of course every superintendent wishes to do this in a way which, while effective, is as economical as possible. What we have to consider, then, are the quality of the paper, the permanence of the ink, and the proper binding.

To go back of the clinical history for a minute: I believe there should be in every hospital in bound form an entrance and discharge register kept in the admitting office, giving a few essential facts concerning all patients—namely, an entrance number, name, age, civil condition, address, admission diagnosis, to which service sent in hospital, address of nearest relative, and discharge diagnosis—and with this should be a bound index. These books are used continually, year after year, and should be made of the best linen ledger paper not less than 5.5/1000 of an inch thick. We have found paper of this quality and weight satisfactory to give the needed strength for hard use. The books should have the best binding, and be rebound promptly whenever the pages show signs of becoming loose. I wish here to add a word of caution: a hospital register should not be allowed to remain in a book bindery over night, as one cannot be sure that proper care is exercised to prevent loss by fire. The register and index are too valuable to take any unnecessary chances of losing.

To return to the clinical record: I have made quite a study of the matter of economy of record material. So far as I have been able to ascertain, there is no easy way to test paper and say that is 100 percent, 75 percent, or 50 percent rag stock (or sometimes so-called "linen"). Of course, we know that the rag papers are the durable ones. The cheap papers (sulphite process) made of wood pulp, are not durable. You are familiar with the appearance of a newspaper that has been exposed to sunlight for a few days, the deep yellow color it turns, and the faded appearance of its ink. This tendency of light to turn paper yellow occurs somewhat in all paper, but least of all in the good qualities of "linen" paper.

For the large hospital, using a great quantity of paper, I think we should have competition in furnishing papers of all kinds. One cannot have successful competition unless different firms are allowed to submit papers of different brands, for in the paper trade some few printing companies have exclusive right to certain water-marks, and therefore we limit competition if we order by the water-mark. How, then, are we to judge qualities in competition? I believe it is fair to say that the stronger the paper is (of a given thickness), the better it is—i. e., the more rag is used to make it, the more durable it will be as a record. To test this, we use a machine made by the Ashcroft Paper Company, which measures the breaking strength of paper in pounds. Several tests should be made in each sample and the average noted. Now, as strength increases naturally with thickness, we must control these tests by noting the thickness. There are on the market many paper calipers which measure in $\frac{1}{1000}$ of an inch. It is a simple matter, then, to make these tests. I have tested for strength and thickness papers which we have used successfully for clinical records, and I submit the following for your consideration:

For ordinary history sheets, a paper having a breaking strength of not less than 40-45 pounds and $4.5\frac{1}{1000}$ of an inch in thickness. For temperature charts,which are usually handled much more than the other sheets, a little heavier paper. We use for this purpose a paper $4.5\frac{1}{1000}$ of an inch thick and consider that its breaking strength should be not less than 50 pounds. It is a matter of considerable importance to use as thin paper as will answer our purpose, for all paper is sold by the pound, and unduly thick paper means bulky volumes, requiring additional wall space in our libraries, an important consideration if we are to have fireproof storage, which is expensive to provide.

Now, another point, concerning ink: What is the advantage of having good record paper if a poor, fading ink is used? In Massachusetts we have a state law which requires that all state, county, and city records shall be written with an ink specified by the commissioner of public records and supplied by the commonwealth. While I am not sure that the law would require us to use it at the Massachusetts General Hospital, a private corporation, we feel it our duty to do so, and for many years have used this ink. It is made by the Carter Ink Company. I believe any one who desires to use this ink can obtain it.

I have not spoken of typewritten records. The commonwealth of Massachusetts also specifies

what typewriting ribbons shall be used, having made tests of the permanence of typewriting inks as well as writing inks. Needless to say, we also use typewriter ribbons which are in this list.

As to proper bindings: For books much used, calf and pig skin covered volumes are best, but not recommended for hospital records, as leather which is not constantly handled and kept soft by the oils from our hands, soon dries up and goes to pieces. Buckram is the best binding, but expensive. Canvas has been found to be a satisfactory, moderate priced binding, and experience has shown it to be very durable.

Storing records: What conditions should we have for the best keeping of our records? It goes without saying that records should be safeguarded against fire, and therefore a fireproof room is necessary. The best example we have of the keeping of records is that of the preservation of papyrus records in Egypt. The principal reason of the successful preservation of these records for thousands of years is probably the absence of moisture when they have been found. Therefore our cue is to have a dry place for our records. How many place old records in a more or less damp basement? You may say you use a fireproof vault. Has it air spaces in the walls, and is it lined with metal as an additional measure to prevent its becoming damp?

Latterly, in some hospitals, clinical records are dictated to stenographers and by them typewritten. Is this a good method to follow? I believe the time will come when all busy hospitals will adopt this practice, and I know that at the Massachusetts General Hospital it is becoming more and more difficult for interns to find time to write records. The added work placed on them, such as the complicated tests to be made, added laboratory work, etc., has grown tremendously. Perhaps some of us trained years ago do not fully realize how much this means. It is proper for house officers, like the rest of us, to be kept busy, but they should not be overburdened with so much detail in record writing that they do not get sufficient time off to keep in good health. I am of the opinion that records written by anyone but exceptionally well-trained stenographers would have to be corrected. It is certain, however, that typewritten records are much more easily read. Headings stand out, and, if underscoring is used in suitable places, important parts of a history can be readily located. After being typewritten they should be read and initialed by the dictator, who may then be held responsible for their accuracy.

FIRST AID HOSPITALS IN COAL MINES.

Underground Facilities Make Possible Intelligent and Timely Treatment Immediately After Employees Are Hurt—Mine Hospitals Are Well Furnished, Electrically Lighted, Freely Ventilated, and Have Hot and Cold Water.

By D. H. LAKE, M. D., Chief Surgeon Kingston Coal Company, Kingston, Pa.

THE establishment of mine hospitals in the anthracite mines came about through the enactment of a law for that purpose in 1901. Section 1 of this law reads as follows: "Be it enacted . . . that within six months after the passage of this act it shall be unlawful to operate any anthracite mine employing ten men or more, in the state of Pennsylvania, unless said mine is provided with a sufficient quantity of linseed or olive oil, bandages, linen, splints, woolen and waterproof blankets. Said articles shall be stored in a room erected at a convenient place in the mine, which room shall not be less than 8x12 feet, and sufficiently furnished, lighted, clean, and ventilated, so that therein medical treatment may be given injured employees in case of emergency. The furnishings shall be sufficient to accommodate two or more persons in a reclining and sitting posture."

Section 2 of the law states that "it shall be the duty of the mine foreman or his assistants, in case of injury to any employee by explosion of gas or powder, or by any cause, while said miners are at work in said mines, to at once visit the scene of accident, see that the injured is carefully wrapped in woolen blankets and removed to the medical room and so treated with oils or other remedies as will add to the comfort and care of the patient. After being treated with all the skill known to the foreman or his assistants, the injured person shall be carefully wrapped up and sent to the surface, to be taken home in an ambulance or to the mining hospital, as may be desired, without expense to the injured party."

It is perhaps only just to state that prior to the enactment of this law some of the companies, notably the Delaware, Lackawanna & Western and the Delaware & Hudson companies, had established a system of first aid instruction, and it is likely that the value of such instruction later attracted the attention of the state Legislature, which in May, 1901, passed the law known as the Emergency Hospital Act, just fifteen months after

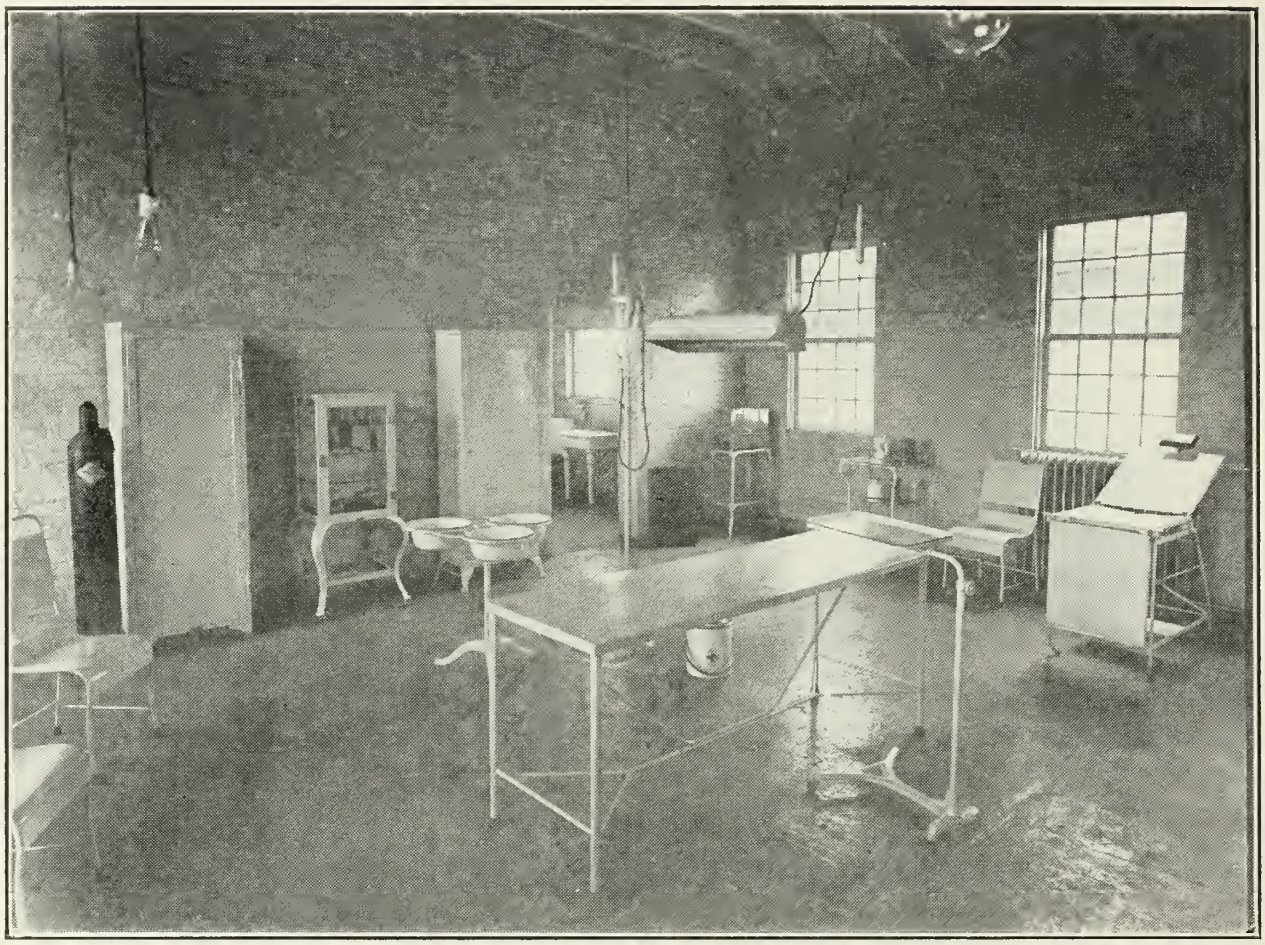

Fig. 1. Mine hospital, Kingston Coal Company, No. 4 colliery—Operating room.

the instruction of the mine foremen and their assistants of the Lackawanna company had been inaugurated in the Kingston district. From that time on the work has been gradually systematized until today all coal companies operating anthracite mines take an active interest in the work of rendering intelligent first aid to the injured.

While the law prescribes the size of the underground hospital, I have seen but one as small as the requirements. Many are from 8 to 12 feet high and 12 feet wide by 14 feet long. The floors are of cement, and the walls are either painted white or whitewashed. All are equipped with stretchers, tables, and chairs, hot and cold water, and most of them are electrically lighted. Large tin boxes, or cupboards, made into the solid wall contain the surgical dressings, splints, and medicines needed for the immediate care of the injured.

In addition to the maintenance of the mine hospital, most of the companies have installed mine rescue stations, fully equipped with oxygen helmets, such as the Draeger rescue apparatus and the pulmotor. After explosions in the mines, men trained in the use of these apparatuses enter a mine filled with noxious gases in quest of their fellow-workmen overcome by the vitiated air. Recent inventions have given us safety electric lamps supplied from storage batteries, which are used in exploring gaseous places.

Throughout the anthracite region we have had recently the annual first aid contests among the various companies, in which from twenty to seventy first aid teams, each of five employees and a subject, participated. The teams are instructed by the company surgeons. The amount of good accomplished by these teams is simply wonderful.

Fig. 2. Mine hospital, Kingston Coal Company, No. 4 colliery.

Fig. 3. Mine hospital, Nottingham colliery, Plymouth, Pa.—One or more of this equipment is at every colliery.

The letters given below from Dr. J. M. Wainwright, surgeon-in-chief of the Moses Taylor Hospital at Scranton, whose beds are free for all the injured of the Delaware, Lackawanna & Western Coal Company, and from Dr. George W. Guthrie, of Wilkes-Barre, whose prominent connection with the American Medical Association for many years has given him a deserved national reputation, speak in no uncertain terms of the value of systematic first aid instruction.

The most complete mine hospital of which I have any knowledge is one recently equipped by the Kingston Coal Company at their No. 4 colliery, an illustration of which is here shown. Every convenience of the modern operating room is here found. This hospital room is on the surface, while the others shown are underground.

Fig. 4. Mine hospital, Mineral Railroad and Mining Company, Cameron colliery, Shamokin, Pa.

SCRANTON, PA., July 23, 1914.

Dr. D. H. Lake,
Kingston, Pa.

Dear Dr. Lake: Replying to your recent letter, I beg to state that we have in recent years noticed the greatest improvement in cases coming to the Moses Taylor Hospital after preliminary dressings in the mine hospitals or elsewhere at the hands of first aid teams. It is a matter that is hard to prove by statistics, but I feel quite certain that we are now able to save the lives of a considerable number of men every year because they have received proper first aid treatment at the scene of accident.

A similar improvement is also to be noted in injuries where life is not at stake. The men are now much more comfortable when they reach us, and infection of wounds and other complications are much less frequent than formerly.

I feel quite certain, aside from the humanitarian value of the work, it affords a great cash saving to the companies by making the results of accidents that do occur as slight as possible. J. M. WAINWRIGHT.

WILKES-BARRE, July 10, 1914.

Dr. D. H. Lake,
Kingston, Pa.

Dear Doctor Lake: My conclusions concerning the results of first aid rendered to injured persons admitted to the Wilkes-Barre City Hospital are these: Fractures are frequently found so well reduced that an x-ray examination justifies no disturbance; open wounds have sterile dressings applied, and infection is thereby prevented; bleeding vessels are well controlled by skillfully applied

tourniquet; burns are usually well treated, though one or more of the hospital attendants state that oily or greasy applications are not as good as dry picric acid dressings. Dr. A. J. MacRea, superintendent Wilkes-Barre City Hospital, the interns on duty, and the surgeons in charge justify these conclusions.

When I compare these results with those we had in olden times when injured men were brought in without any dressings at all, or those of the crudest character, when simple fractures became compound in transit, when men died of hemorrhage in the ambulance, when shock from untreated burns, scalds, and other injuries was greatly intensified, I am convinced that the instruction given in first aid is well worth the time, trouble, and cost of the undertaking.

GEORGE W. GUTHRIE.

FIRE PROTECTION AND FIRE DRILLS IN HOSPITALS.

Radical Defects in the Usual Escape Devices Developed by Fire Drills—Only Safety for Hospital Patients Lies in Fire Walls and Doors, So They Can Be Moved to Unaffected Sections of Buildings on Fire.

BY H. F. J. PORTER, M. E., NEW YORK.

SOME ten years ago in a factory in a western city a panic occurred due to a false alarm of fire, and in this panic a number of girls were injured. Shortly afterward I took charge of this factory. Meanwhile a number of casualties occurred, which profoundly impressed me with my responsibility for the lives of the people employed in my building, notably the Iroquois Theater fire in Chicago and the Baltimore city conflagration.

Accordingly, I immediately began to study, in the first place, how I could prevent a fire happening, and, in the second place, in case of a fire occurring, how the occupants of the building would be able to effect their escape promptly and readily without panic and accident. When I started to obtain these results I found myself confronted with many obstacles. I called in the chief of the fire department for advice, but he told me that, beyond making certain provisions to prevent a fire and developing a fire fighting brigade, he could be of no assistance. I then secured the services of a drillmaster from one of the public schools, but, after looking over the situation, he informed me that the problem was beyond his capability of solution, as my building was different from those in which he was accustomed to install fire drills, they having many and wide stairways, whereas mine had only one narrow one, and the people with whom he was accustomed to deal being children subject to discipline, whereas my people were adults, who could not be controlled in an emergency. I then applied to several of the large representative manufacturing concerns about the country, only to find that in no instance had they installed a fire drill which would take the employees out of their building.

Being thrown on my own resources, I developed what was, as far as I have been able to ascertain, the first factory fire drill in this country which actually took the employees out of the building. I did not accomplish this result, however, without having to make a number of changes in the building, installing in effect a separate or exclusive stairway exit from each floor. I did this because I found that when the occupants of the various floors tried to make their egress from them simultaneously by means of the single stairway, the various streams of people collided on the landings and the stairway acted like a funnel into which many streams were pouring, but out of which there was only one small opening from which they could emerge.

When this fire drill was finally operating successfully, it emptied the building of between 300 and 400 occupants within three minutes. The frequent repetition of this fire drill taking the people out of the building onto the street aroused the interest of the public so that other local manufacturers wished to have a similar installation in their factories and I soon found myself in demand aiding them in working out similar problems in their factory buildings, which were as difficult of solution to them as mine had been to me.

In all of these cases I discovered, much to my surprise, that the exit facilities were entirely inadequate for the large number of people housed in the buildings in case an emergency should call for the egress of everybody within a short period of time. Therefore I found it necessary to increase these facilities, putting in a separate stairway for each floor in almost all cases, so that the occupants of a floor could enter their own stairway and make their descent and egress from the building without colliding with the occupants of any other floor.

This was the beginning of a study, continuing through a number of years, covering methods of fire prevention and of exit capacities for the purpose of improving the conditions affecting safety to life in buildings of all kinds and descriptions. In the course of this study I came to realize that, although stairways serve as satisfactory exit facilities under normal conditions, yet when crowds attempt to use them under emergency con-

ditions they become congested and dangerous on account of their inadequacy. The same is true of elevators. Fire escapes have for a long time been recognized not only as fire traps per se, but as indicating by their presence the fact that the buildings on which they are located are lacking in adequate interior exit facilities. I soon found that practically all buildings which contain many people actually are unsafe, especially high ones, and that attempting to make their occupants safe was a problem not of drilling people how to escape from an unsafe building, but of making the building itself safe, and then no drill would be required because no hurried evacuation of the building would be necessary.

I gradually evolved a method of making buildings safe for their occupants in case of emergency by supplementing the vertical exits, in which latter category fire escapes, stairways, and elevators are classed, with what I call "horizontal exits," which not only serve as means of escape by themselves, but convert the vertical exits into safe features also. This horizontal exit was developed either by supplying new or developing old division walls running across the buildings from cellar to roof with doorways in them, so that people could pass horizontally through the latter from over a fire or from a fire on the same level, close the fireproof doors after them, thus providing a barrier against the fire, and then find themselves in a section of the building or in another building where they would be perfectly safe and could stay until the fire was extinguished or from which they could make their descent to the ground by means of the vertical exits under normal conditions—that is, without undue haste and in safety.

It was not until the Wolff factory fire in Newark in the fall of 1910, in which twenty-five lives were lost and many people were injured, and the Triangle Waist Company's fire in New York in the spring of 1911, in which 147 lives were lost, that I found that my many years of work in this field, together with the publicity which it had been accorded, had had a cumulative effect and that people realized that the occupants of crowded buildings were not safe in cases of emergency owing to the inadequacy of their exit facilities.

Taking advantage of the public sentiment which had been crystallizing around this thought, I succeeded in obtaining a group of representative citizens connected with some of the civic and technical organizations with which I had been working along these lines, and we went to Albany and secured a hearing before the governor and the two houses of the Legislature, asking for the appointment of a state commission to study the problem of safety to life in crowded factories and recommend legislation to effect its solution. In fact, the delegation stated specifically that the people in these buildings had but two alternatives in case of fire—namely, "to burn to death or jump to death." Thus came about the New York State Factory Investigating Commission, which was authorized primarily to provide relief to the hundreds of thousands of employees throughout the crowded factories of the state from the serious danger to life from fire. I was appointed "adviser on the fire hazard" to this commission, and associated with me in this work was Mr. A. L. A. Himmelwright, C. E., of wide experience in construction work, and we have remained associated ever since on work which has developed as a result of the recommendations of this commission.

The studies which we made of the capacity of stairways for the commission confirmed those which I had made previously alone, and the results, when published, indicated that mine were the first studies of the kind which had ever been made, or at least of which any records were available. These studies showed that an abnormal condition had been allowed to develop in the industrial field by piling factory on factory, each one containing upward of 100 working people per floor, and having for their exit facilities only one or possibly two stairways, the capacity of each of which would not exceed at the most twenty or twenty-two people per floor. If access to one of these stairways should happen to be cut off by fire, the other would have to bear the burden of caring for the total occupancy of the floor.

I recommended to the Factory Investigating Commission that there be required two exits from each floor, at a distance from each other, so that if one should be cut off by a fire, the other could be used. I recommended also that if these exits were of the vertical type, the occupancy of each floor be limited to the capacity of one of these exits; but if one of them was of the horizontal type, the occupancy could be increased to the capacity of the floor area at the rate of one person for every five square feet in the smaller of the two sections of the building formed by the division wall.

After many public hearings and conferences and much correspondence the general principles which I laid down were accepted by the commission, and they proceeded to frame legislation to make these principles effective. Meanwhile my investigations into safety conditions in buildings had extended outside of factories and into buildings of all kinds, including public institutions, such as hospitals, asylums, etc.

In this latter connection I remember having an interesting experience several years ago when I

was asked to look over a large hospital in an eastern city and make a report on it, in order to inform the authorities in charge what, if anything, should be done to insure the safety of the lives of the helpless occupants in case of fire. As no arrangement had been made by the architects to provide such safety, it devolved on the authorities in charge to take such steps as they thought proper to meet this deficiency.

Having canvassed the experience of the officials of other hospitals in this country and in Europe, and finding that no hospital offered any provision whatever of this nature, in the course of their further pursuit of information as to what to do there was brought to the attention of these authorities a chute fire escape somewhat like the "down and outs" one sees at recreation parks. This consisted of a steel cylinder, with a helical slide in it of the same material and furnished with entrance openings in its side. Two of these were installed on trial. It was intended that in case of a fire the helpless patients would be thrown into these chutes through the side openings at the different floor levels, from which they would slide by gravity down to the ground, where they would be cared for by attendants, who would take them away as rapidly as possible and provide for them elsewhere.

On first being told of this arrangement, I felt that my informant was imposing on my credulity until he insisted that such was the safety measure which had been provided, and it was with considerable reluctance that I was persuaded to spend the time that would be necessary to see the operation of this appliance. I, however, interviewed the superintendent, who told me that it worked perfectly and that he had fire drills in it every month. I asked him how he arranged to take the patients from their beds and get them into the chute. He told me that two nurses were assigned to the duty of taking the four corners of the blanket underneath the patient and pinning them together over him with a specially large, strong safety pin. Then the patient would be lifted by means of this blanket from the bed to the floor and dragged to the chute, into which he would be thrown. As there were only two nurses and about 25 patients in his ward, I asked how long it would take to empty a ward by this means. The superintendent said he had never timed the performance, but estimated that it would take about a minute for each patient. As twenty-five minutes would be consumed in this process, it seemed to me that the safety to the patients who would be among the last to be put into the chute was not thereby insured, for I doubted if the nurses would remain faithful to their task for such a length of time in the face of a real fire, which in the meanwhile might gain considerable headway.

As he had told me that they had frequent fire drills, I asked him if it would be practicable for him to have one for my benefit. He readily acquiesced and issued an instant order, and I prepared myself to watch an interesting performance in which there would be involved a large number of blind, lame, imbecile, tubercular, sick, and injured in all stages of infirmity, old people as well as babies, together with the able-bodied attendants, who would be included. I asked him if he did not find that an experience of this kind had a serious effect on the patients, and was surprised to have him reply that he hoped I did not think that he included the patients themselves in the fire drill. To my inquiry as to what purpose he should drill anybody else than those who were to be the participants in the performance in case of an actual fire, he told me that it would not do to drill the patients, as such an experience would kill most of them. It seemed to me strange that he should go to the trouble of introducing a method of saving the people which would result in almost as many fatalities as the fire itself would cause, and I asked him whom it was that he drilled. To this question he answered that he drilled only such able-bodied men and boys as were at the time at work on the grounds in the vicinity. He could not explain very satisfactorily the object of drilling these people, but in a general way he expressed the idea that the patients, seeing them go through this performance, would observe the working of the chute and that they would somehow be expected to go through a similar experience in case of a fire.

I asked him what was the program of his drill, and he said that he usually had about ten of these able-bodied males go to the top of the chute and jump in, and, as they always came out at the bottom, it exemplified the satisfactory operation of the chute and this served as the periodical fire drill. I asked him why he did not have more people in the drill, some of whom would be located at each floor, and have these latter jump in while the stream from above was going down, thus carrying out more nearly the actual conditions that would occur in a fire. He told me that he had never considered that feature, but that anyhow he did not have enough people to develop so complete a demonstration, and that, even if he had, he doubted very much if those outside would be willing to jump, with their boots on, on top of those within, or vice versa, as the result might be disastrous to the faces of those who were passing down.

While we were talking we proceeded to the base

of one of these chutes, and at the same time the men and boys who were to make the demonstration ascended to its top. On our arrival at the site everything was ready, the signal was given, and tne demonstration started by the group on top jumping in, and we held our watches to see how quickly they would descend. To our great surprise they did not come out at the lower exit as quickly as we had anticipated, and we waited and waited. We could hear quite a commotion in the upper regions within the chute, and gradually the source of this noise seemed to descend slowly until finally one of the men emerged, and then the rest one after another. It was then disclosed that the salt air had rusted the steel to such an extent that the slide was very rough, developing so much friction that it did not operate as intended, the participants having to gradually work their way down from the top, and meanwhile they were stirring up rust and dust to such an extent that they were not only covered with both from head to foot, but inhaled and swallowed considerable also, so that they were in a sorry plight.

The superintendent apologized for the failure of his apparatus, and remarked that was always the way when a demonstration was given without previously rehearsing for it, to which I replied that he could not always have a rehearsal just before a fire would occur, and that I thought this whole method of saving people could hardly be called practicable. Not wishing to acknowledge that the apparatus was a complete failure, he said that if I would come to the chute installed at the other end of the building he knew that would operate more satisfactorily, because they used it daily to slide the wash down through it and thus it was kept clean and smooth.

Wishing to be courteous to my host, I agreed to this proposal, and, as the men and boys seemed to be willing to help out in this continued demonstration, we adjourned to the other chute, where they started to repeat the performance. When, however, the men arrived at the top of the chute, they called down that they could not enter it, as it was full of wash. This ended the opera bouffe exhibition of the practicability of the chute type of fire escape as a safety measure for helpless patients in hospitals in case of fire.

The superintendent then in a most disheartened way asked me what they were to do for a substitute, for as far as he knew this device was the only one that had ever been presented to hospital authorities as a life-saving measure for the patients in case of fire. I told him that I thought I had a method which was more practicable, and he said he hoped I had, for architects had evidently never been able to suggest anything for the purpose. I then described to him the division wall arrangement, with its horizontal exit, and he seemed delighted to know that so simple and practical an expedient was available and wondered why it had not been thought of before.

In looking over the hospital I found that there were division walls already there which could be developed into fire barriers by properly extending them across the building and through the attic and roof, and by properly protecting the openings in them with fireproof doors. Thus the hospital would be divided into a number of contiguous sections, with horizontal exits at each end of each section. This could be accomplished with very little disturbance to the patients and very little expense to the authorities. In case a fire should occur in any one of these sections, it would be confined there by the barriers provided by the division walls, and the patients could be wheeled on their beds through the horizontal exits into the adjoining sections, in which they would be perfectly safe, for with the fireproof doors closed behind them the fire could not follow them there. Meanwhile a fire fighting brigade, developed for the purpose and promptly summoned by a specially designed fire alarm signal system, would attack the fire and endeavor to extinguish it in its incipiency.

Shortly after the two holocausts above referred to, the Department of Charities of the city of New York, having under its jurisdiction public hospitals, almshouses, homes for the aged and infirm, tuberculous sanatoriums, and other buildings of a similar character in which feebleminded and blind patients were housed, asked the fire department to make a survey of their properties and recommend to them what provisions should be made to insure the safety of the helpless occupants of these buildings in case of fire.

A group of experts composed of representatives of the fire department, fire protection engineers, architects, and experts from the fire insurance interests made a report, recommending that thirty-two of these buildings be furnished with additional fire fighting equipment and fire escapes of the chute type similar to those already referred to at an expense of over $200,000. Before this appropriation was finally made by the city authorities, the report was submitted to me for my opinion as to the practicability of the recommendations embodied in it, and to see if the principle of the division wall and horizontal exit could be developed in these old buildings at a cost which would not be prohibitive. It required only a superficial study to see that the recommendations embodied in the report were undesirable, inadequate, and in many cases impracticable, and I was asked to

make a report on the situation as I saw it. My study resulted in a recommendation that the majority of the buildings be treated so as to develop existing walls into division walls. My estimate of the cost of the adoption of this principle, making safe all the buildings of the department, nearly 200 in number, was approximately $175,000. As my recommendations seemed to appeal to the intelligence of the authorities, they were adopted and put into practical application.

The Department of Corrections, controlling the prisons, work houses, houses of refuge, etc., also followed suit, and, as some of their principal buildings were contiguous to those of the Department of Charities, I was asked to devise and install a modern fire alarm system to cover all the buildings in that group and have it uniform in all the buildings of both departments. Soon after this the authorities of Bellevue Hospital asked for a similar report on their old buildings, and my recommendations were adopted there also.

The Department of Public Health and Charities of the city of Philadelphia also asked me to look over the group of old buildings constituting what is termed "Blockley," where the indigent and injured wards of the city are housed, and report on the feasibility of developing division walls and introducing my horizontal exit principle there. As fast as the authorities of these institutions learned of this safety development they opened correspondence with me and arrangements were made for its installation.

With this arrangement in institutions of this character, the procedure in case of fire is so normal and rational that there should be a minimum of excitement, for everyone acts in accordance with the dictates of his natural inclinations. The instructions are very simple, are given to the attendants when they come to the institution, and require no drill. The patients are not disturbed in their beds, being wheeled into the adjoining sections. This procedure will be described in detail in a subsequent article.

The fire alarm system is audible in the wards only to the attendants, but calls the fire fighters from their quarters.

LUNCHES FOR SCHOOL CHILDREN.

Necessity an Outgrowth of Economic Destitution—Free Lunches Versus Lunches at Cost—School Feeding and Education—The American Tendency—The New York Movement—Economy of Central Kitchen—Medical Inspection of Handlers—The Cost—The Profit in Citizenship.

By EDWARD F. BROWN, Executive Secretary New York School Lunch Committee.

THE genesis of the school lunch movement is to be found in the destitution of the people. The intensity of the cruel struggle for existence brought on by modern industry has helped to perpetuate poverty, with its entourage of ignorance, disease, vice, and crime. The absence of the necessaries of life has resulted in a class of badly nourished children. Frequently, however, this subnormal condition is also the result of ignorance of the parent in the proper selection and preparation of food. This incompetence of the traditionally efficient mother is traceable sometimes to the fact that her early economic history embraces chapters of physical incapacity—child labor, lack of domestic training, early marriage in a period of unpreparedness, absence of time, inclination, and vitality to learn the science of domestic economy.

When we discovered a staggering array of malnourished children in school—tubercular, anemic, flat-chested, some so torpid from hunger and weak from exhaustion that the lessons fell on wondering eyes and listless ears—we groped around in the blackness of the situation for a remedy. Food was what they needed, and we gave them food. So much for the beginning of school feeding.

FREE SCHOOL LUNCHES VERSUS SCHOOL LUNCHES AT COST.

In England, with its traditions of peasant exploitation, the social renaissance faced a situation so acute that in the beginning a policy was formulated which provided for free feeding of necessitous children. The pendulum which had swayed to the side of serfdom, indifference, and calloused neglect had now swept to the side of grudging compliance first, then liberality fraught with fear that to deny would culminate in bitter, bloody struggles which actually did occur.

There is much that might be said on the wisdom of such a policy as obtains in New York City, and I shall attempt to give an unbiased estimate of both sides.

The physical welfare of the child today is an index of the sturdiness of the state of the future. In the proportion that we conserve the strength of the child, we may expect it to return to society the fruits of such nurture. The child who is denied proper nutriment—regardless of the cause—is the child who is likely to grow a devitalized body susceptible to disease. Such condition is not one to conduce to individual economic independence.

From this class springs the intermittent worker, the unemployable, the potential pauper. It is for this group, unable to support itself through toil, that we must spend a large portion of our taxes to build and maintain hospitals and like institutions. We must determine in our own minds whether we

Fig. 1. Cooking on a large scale means economy. One central kitchen prepares the food for three to five schools. Five kitchens cook for seventeen schools, with registration of 23,000 children.

can afford to neglect our children in such a way as to lead them straight to our mending depots.

The large sums of money spent for education are, so far as this assemblage of malnourished children is concerned, practically wasted. It is not expected that the child who is weakened from lack of food is in any fit condition to accept the benefits of our educational process. Let us take a concrete example.

SCHOOL FEEDING AND EDUCATION.

The medical inspectors of the Bureau of Child Hygiene of the city of New York found in 1913 about 13,991 children who were suffering from malnutrition. Owing to the lack of funds, the bureau has been enabled to examine only one-third of the school population for physical defects. If we assume that the same ratio of defects exists among the two-thirds unexamined, then there are in the city of New York 51,973 children who are in a malnourished condition. Based on the semi-annual per capita of $19 as the cost of education in New York City, the $987,487 spent for educating this group of children has undoubtedly failed to bring about the results which might be reasonably expected if the same sum of money were expended on the education of physically normal children.

The New York School Lunch Committee, at a net deficit of less than $5,000, during the school year of 1913-1914, has served over 1,250,000 portions of food to the children in seventeen schools, with a total registration of nearly 25,000. Thus it is apparent that $5,000 spent on the feeding of malnourished school children would have enhanced the returns which might be expected from the $987,487 or any sum spent on education.

Education is provided in such bountiful measure because it is a good state policy. It protects society against illiteracy and the train of evils which follows in its wake. In the same sense that education is a defense against national decadence, so the building up of sturdy physiques is a means of warding off the enormous cost of rearing and subsequently caring for a race of constitutional degenerates.

The return in social efficiency which flows from the solicitude of a state in the nurture of its wards is so great as to outweigh the actual cost of providing social agencies to care for an adult population stricken with disease and defects, many of which can be traced to early neglect.

On the other hand, there are those who hold that it is not the function of the state to provide food—that it tends to pauperize the population. They ask if the state provides food, where are we to draw the line of demarcation? The unfortunate condition is the result of parental indifference. Are we to encourage such a state by relieving them of the just share of their burden? A premium is thus placed on parental inefficiency. Such a liberal tendency as the provision of free food would tend to augment the conditions which, to say the least, are deplorable and costly.

Fig. 2. A sufficient portion awaits every child. A good three-cent meal will wholly satisfy a child's hunger and yield sufficient nourishment for growth.

THE AMERICAN TENDENCY.

The general tendency of the American school lunch movement is in the direction of providing food and having the children pay for its cost. This has taken from the activity the strain of charity. The most persistent cry of all the opponents of the measure has been that school lunches tend to disrupt the home—casting a pall over the

picture of peace resembling the contented Cotter's Saturday Night. Of course, those who assume that the children who clamor for food come from homes which are intact are justified in the stand they take. But it is a different picture which looms up before the administrator of school lunches—he sees that the economic condition of many families has started the trend away *from*

Fig. 3. Socializing the noon hour. Orderliness and clean service add to the value of school lunches as an educational factor.

the home and to the factory. Industry has already destroyed the home, which the school lunch movement seeks to help put together. Wives have been compelled to supplement the meager income of the chief breadwinner by factory labor. Where the family is large, *industry has invaded the home* through the pernicious system of homework—factories sending work to be finished in dwellings, where mothers snatch brief moments from the cares of the household to labor incessantly for a mere pittance on such things as sanitary toothbrushes and sanitary hairbrushes, made in miserable and unspeakably filthy tenement homes, with the smallest children harnessed to the task. Whether the mother goes into the factory to work or whether the factory comes into the tenements of the poor, the result invariably is the neglect of household duties; so that the child of school age whose mother works out or whose mother is being worked *in* finds itself at noon without the well-balanced rations that the developing body of the child must have in order to grow strong. It is here that the school lunch movement performs a real public service. While other agencies are engaged in the work of raising wage standards in industries, and others are interested in the problem of making the home a livable place, and still others are absorbed in the work of abolishing home labor, the children are growing (?) up in neglect. When tenement homes will be cleaned up and made into cheerful places, when the man shall receive a living wage for his work, when it will be possible for the mother to remain home to bring up her children in an atmosphere of cheer and comfort, when home work is abolished and school children, through intelligent mothers, are well provided with food in proper quantities at proper times—then the school feeding activity will have no place; its purpose served, a motion will be in order to disband the same, and that, I am sure, will be cheerfully carried.

But the committee has a purpose other than the mere provision of food to children. Its social educational aspects are not to be underestimated.

With the theory of school lunches thus briefly reviewed, let us examine the New York system of providing lunches at cost.

THE NEW YORK CITY SCHOOL LUNCH MOVEMENT.

The movement in New York City is the most extensive provision of meals at cost to children in the United States. The activity is carried on by the New York School Lunch Committee, a voluntary noncommercial group of interested citizens,[1] with a paid staff of forty workers.

From 1908 to 1913 the New York School Lunch Committee, dependent on uncertain voluntary contributions, maintained a lunch service, commencing in two schools and gradually increasing to nine. In the summer of 1913, through the noble gift of Mrs. Elizabeth Milbank Anderson to the New York Association for Improving the Condi-

Fig. 4. Mothers working out cannot provide their children with lunch at home. Warm nourishing food at minimum cost now replaces the stuff of the street.

tion of the Poor, the financial burden of feeding school children was assured for a period of ten years. The reorganization of the committee provided for the operation of seventeen schools, with

[1]New York School Lunch Committee—Miss Mabel H. Kittredge, chairman; Dr. C. Ward Crampton, Dr. Thos. D. Wood, Dr. Ira S. Wile, John Martin, Mrs. Ernest Poole, Mrs. J. T. Ryerson, Mrs. Benjamin Whittaker, Mrs. V. G. Simkhovitch, Miss Lillian D. Wald, Miss M. A. Nutting, Miss Edna M. Klaer, Dr. Donald B. Armstrong, John A. Kingsbury, Willard D. Straight, Bailey B. Burritt, James H. Hutchens, Edward F. Brown.

a total registration of nearly 25,000, an increase of eight over the previous year. Under the enlarged program the committee has just concluded the first year of operation.

THE ECONOMY OF THE CENTRAL KITCHEN.

The distinctive feature of the work was the experiment with group or central kitchens. Under this plan the food for the seventeen schools was prepared in five central kitchens and distributed each day to the respective schools in large covered sanitary containers. In addition to providing penny-an-article portions of warm food at noon, a special service of milk and crackers in the middle of the morning was maintained for the children in eight anemic, cripple, and kindergarten classes. A year of the central kitchen has demonstrated the saving which can be effected thereby. In 1913 the committee operated nine schools and had to meet a deficit of $4,320.94, making an average deficit per school of $480.10. In 1914, when the committee changed its plan of operation by using the central kitchen, in operating seventeen schools it had to meet a net deficit of only $4,-624.52. The average deficit per school was $272.01, a decrease in the average deficit per school of $208.09.

MEDICAL INSPECTION OF FOOD HANDLERS.

In order to avoid any possibility of disease transmission through the handling of the food by our workers, each employee submitted to a thorough medical examination to ascertain her liability as a disease carrier. In addition, two-thirds of the staff were vaccinated.

SOME ADMINISTRATIVE DETAILS.

Each item of food sells for 1 penny. In order to insure to each child a maximum of nutrition, a rule was adopted which precludes a child from purchasing unless the first penny is spent for soup. This soup is made in varieties to suit every taste. The quantity is one-half pint, and there are twenty-five kinds, touching the three predominant national tastes—American, Italian, Jewish. After the first "forced course" the child may choose from a variety of expertly selected and hygienically prepared items consisting of

Bread fritters,
Tomato salad,
Cabbage salad (with boiled dressing),
Lentil salad,
Apples,
Prunes,
Sliced bananas with milk,
Sweet chocolate squares,
Apple pie,
Rice pudding,
Cornmeal pudding,
Vanilla cake,
Chocolate pudding,
Apples on stick,
Grapes,
Bread pudding,
Crackers of all kinds,
Potato salad,
Ice cream,
Baked apples,
Apple sauce,
Crackers,
Cocoa,
Jelly cake—2-egg sponge cake with jelly,
Sandwiches—jam, lettuce, pot cheese, American cheese, egg and onion, meat and bologna, bologna, butter, radish.

Owing to the cosmopolitan character of New York City, it is necessary to divide the nature of our food into three classes. In the schools where Americans predominate we have American cooks, and the food is that usually found in the American home. In the Jewish schools we employ Jewish cooks; the food is "kosher," and regularly inspected by a rabbi to insure against religious or racial offense. Italians are in charge of the Italian schools.

No food is given away free. Frequently where a family languishes in the grim twilight of poverty the charity society provides the mother with funds to give to the child. As a part of its treatment of the case in this manner the poor child is not singled out as a pauper's offspring. The idea of school feeding at cost has taken deep root. It is accepted by all the children—and is more acceptable, perhaps, than free food, because money is paid for the food provided. It has also engendered a respect for the food, which would be lacking if it were given away free.

THE EDUCATIONAL ASPECT.

The underlying purpose of the school feeding movement in New York City embraces a broader aim than the mere provision of food to children whose parents for some reason are unable to supply their wants at noon in the home. We seek to reflect insofar as possible the hygiene of food and food handling through the child into the home. If evidence of the partial success of this aspect were wanting, we would need merely to refer to the many mothers who have come to our kitchen to inquire how to make the dish which tasted so good to Johnnie. Our efforts to inculcate the lessons of food economy are brought home through a series of mothers' meetings, at which the administrators of the activity explain the purpose of this movement.

THE SCHOOL FEEDING DEFICIT.

School lunches in New York City have not yet reached the self-sustaining basis. In providing food at 1 penny a portion and insisting that the children purchase soup first—the item on which the deficit is incurred—it is readily seen how it is necessary to meet a slight deficiency. The loss, amounting in 1913-14 to .0037 per portion, is due to the cost of supervision. The penny the child pays covers the cost of the food and its preparation. The total deficit for the school year in the service of 1,249,489 portions aggregated $4,624.52. This sum was paid by the committee from the Anderson fund in the trusteeship of the Associa-

tion for Improving the Condition of the Poor's Department of Social Welfare.

THE COST.

From October 1, 1913, to May 22, 1914, the committee sold 1,249,489 portions of food, for which the children paid $12,494.89. The average daily attendance was 3,337 and the average amount spent per child was 2.9 cents. Chiefly through the concentration of energy, made possible by the central kitchen plan, we have been enabled to save .0019 cents on the preparation of each item as compared with the year previous under the individual kitchen scheme.

The following comparison of the average net deficit per school under the individual kitchen plan in 1913 and the group kitchen plan in 1914 is enlightening:

Year	Number of schools operating	Net deficit	Average per school
1913	9	$4,320.94	$480.10
1914	17	4,624.52	272.01

A saving in 1914 of $208.09 per school.

The following table is the summary financial statement from October 1, 1913, to June 1. 1914:

Total expenditures	$17,889.48
Total receipts	12,494.89
Gross deficit	$ 5,394.59
Equipment cost—15% less for depreciation	770.07
Net deficit	$ 4,624.52
Deficit per penny portion	.0037

THE AIM OF THE SCHOOL FEEDING MOVEMENT.

The ultimate aim of the activity under discussion is to provide a hot, stimulating, and nourishing lunch to the school children who are unable for any reason to procure a warm, well-balanced meal at home. The large and unnecessary number of malnourished children whose mental and physical growth is being impaired indicates the necessity of such a movement as ours.

We believe that, with a further concentration of our energies and an extension of our field, penny-a-portion school lunches will be self-sustaining, except for the cost of rent in the school buildings. It is our purpose to demonstrate to the educational authorities the possibility of a self-supporting school feeding plan, so that the same may be installed in the localities where such a service is most needed.

The committee plans in 1915 to extend its work to eleven additional schools, making twenty-eight in all, with a registration of over 44,000 children to whom this service will be available. For such extension the committee is asking the Board of Education to cooperate to the extent of furnishing the necessary equipment, which will entail an expenditure of approximately $6,500.

HOW NURSES MAY CONTRIBUTE TOWARD A HOSPITAL'S SUCCESS.

A Happy, Congenial "Family" Will Graduate Loyal Nurses, Who in Their Turn Will Act as Publicity Agents to Popularize the Hospital—Nurses Meet Many People and Can Often Help by Molding Public Opinion.

By MISS AMY BEERS, Superintendent Jefferson County Hospital, Fairfield, Iowa.

THE personnel of the nursing staff stands as a preeminent factor in the success of any hospital, and especially does this hold true in the small public hospital situated in a rural community. The people want a hospital with some home atmosphere, where they are made to feel from the moment of entering until their departure that every one connected with the institution is personally concerned in their welfare and is earnestly striving to make them comfortable.

In order to accomplish this, first, the personality and professional training of graduate nurses who assist in the management are to be considered. They must be dignified, but with a gracious manner, and should possess the art of adaptability. They must be impressed with the value of their individual efforts, and made to realize that only by perfect cooperation with the superintendent and unfailing loyalty to her ideals can the work become established. Next, the qualifications of candidates for admission into the training school should be carefully studied. In small hospitals, it seems that personal interviews are necessary in order to exercise good judgment in the final selection of pupils. It is almost impossible through correspondence to determine their real fitness for the work. Will they possess the requisite home training, making them courteous, patient, kind, industrious, observant, and thoroughly reliable?

Providing suitable students are selected and a complete training given, with proper supervision, the hospital is bound to be successful, for its reputation depends largely on the ability of the nursing force. It is absolutely essential that the nurses have pleasant environment (a comfortable home, with provision for recreation), that the hospital family be a happy one, to insure the steady interest and enthusiasm so indispensable to success. Teach the nurses to give attention to detail; things that appear to be mere trifles to people in normal condition loom up as real troubles to the sick.

In organizing hospital work in a new territory,

plan for a sufficient number of assistants, that they may give the "personal touch," which means so much to those who have never been away from home and familiar faces when ill. Instill into the nurses the spirit of justice, giving all patients their best service, never by word or deed allowing personal preference to be known. Frequently sick people are supersensitive and somewhat childish. When dealing with country people, who are most democratic, it has been found better to make no distinction between private room patients and those occupying the ward beds, particularly when they mingle in the sun rooms during convalescence, or have visitors in common; nor should the care of "county" or "free bed" cases be any different. The good will and gratitude of this last class will help to make the hospital popular.

Promptly discourage any discussion of the patients by the nurses, either inside or outside of the hospital, but help them to form the habit of telling the impersonal points about their work and the strides forward in their profession in such a way as to attract the interest of the people to the extent that they will consider the hospital worthy of their assistance, and consequently circulate favorable reports concerning its usefulness.

It is highly important that the members of the medical staff have equal privileges, and are kept informed regarding the hospital equipment and the advantages offered for scientific work. Aim to follow their orders and refrain from any criticism of their methods, for often this is the source of much dissatisfaction.

Too much care cannot be given to the thorough instruction of the nurses in ethics and hospital etiquette, and their personal responsibility in helping toward the success of the hospital. Indiscreet behavior will reflect directly on the hospital and undo the results of many months of well-directed efforts. Have them imbued with the sentiment that their future success is dependent on the status of the hospital from which they graduate.

During the last six months of the senior year, if special classes are conducted in advanced nursing topics, with reference to administrative work, and a course of reading outlined, thereby assisting the students to find the line or field suitable to them and fitting them specially for it, their enthusiasm and loyalty for the hospital will become fixed, and they will develop into valuable workers. Each graduate from the training school should be an educator.

Third, the graduate nurses of the district have a wonderful influence, which may be directed either for or against the hospital, but with tactful management may prove of inestimable value. They meet people in their homes in an intimate manner, and are constantly being consulted on the advisability of entering the hospital for surgical operations, obstetrical delivery, chronic troubles, treatments, and even x-ray and laboratory work.

The superintendent of the hospital might keep in close touch with the outside graduate nurses and the school nurses, unconsciously securing their hearty cooperation, by establishing a registry at the hospital, making no charge whatever. The doctors are very pleased to have some definite place from which to secure a competent professional nurse, and it is convenient for the nurses to keep the hospital superintendent informed as to their whereabouts. The registry's usefulness to the nurses may be extended by furnishing supplies to them at hospital prices, renting certain articles that are expensive and not often required outside of the hospital; in short, making a hospital bureau for the nurses.

By calling the outside graduate nurses to the hospital for "special" cases, the superintendent can learn of their ability and can interest them by explaining all the new methods and equipment, by discussing nursing affairs in general and local conditions in particular—then they are inclined to use their influence wisely. Another way to attract their interest and to keep them enthused for the hospital is to organize a club and include the graduate nurses in the hospital; have monthly or quarterly meetings at the nurses' home and prepare short, interesting programs, followed by light refreshments and music. The discussions should be open, and a report of the adverse criticisms they have heard regarding the hospital will prove of value, and future trouble may be averted. In order to have the meetings well attended, they must be of benefit to the graduate nurses, and this will require the expenditure of some time and energy. The professional journals will be a great aid in making up the programs; the history of interesting and unusual hospital cases might be cited, always omitting the patients' and the doctors' names; any discovery or invention that assists in the nursing care; any new books or publications for nurses; any national or state movement associated with nursing affairs; practical demonstrations of new methods of procedure in nursing treatment; even amusing incidents and errors happening in the hospital might be permitted, if related in an entertaining manner, as a variation.

In resume the keynote is for the hospital management to take a sincere interest in the nurses, and they in turn will use their influence for the benefit of the hospital, thus establishing what the "medical freedom" leaders would term a "hospital trust."

KING'S DAUGHTERS' HOSPITAL, MADISON, IND.

New Institution of English Design—Will Be Fireproof and of Modern Block Type Construction—Interior Planned With Special Reference to Convenience.

THE King's Daughters, Madison, Ind., are to build a thoroughly modern hospital in their home city. Herbert L. Bass & Co., architects, of Indianapolis, have prepared plans and specifications for the building, which is English in design and of fireproof construction throughout. The entire exterior is of brick, with stone trim and tile roof.

The building committee was particularly wise in its selection of a large corner site, providing an ambulance entrance from the driveway leading from both streets to the building, which will be amply protected from noise and dust of the streets.

The hospital provides for 25 beds, divided between the various services, and will cost, exclusive of equipment, approximately $30,000.

A great deal of thought has been given to con-

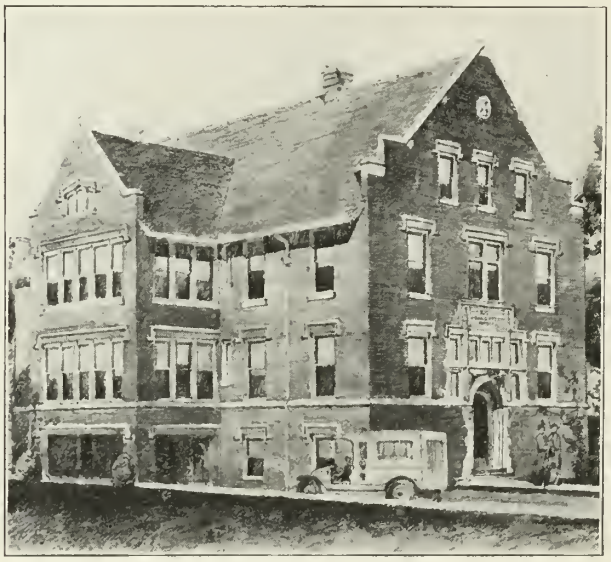

Fig. 1. King's Daughters' Hospital—General view.

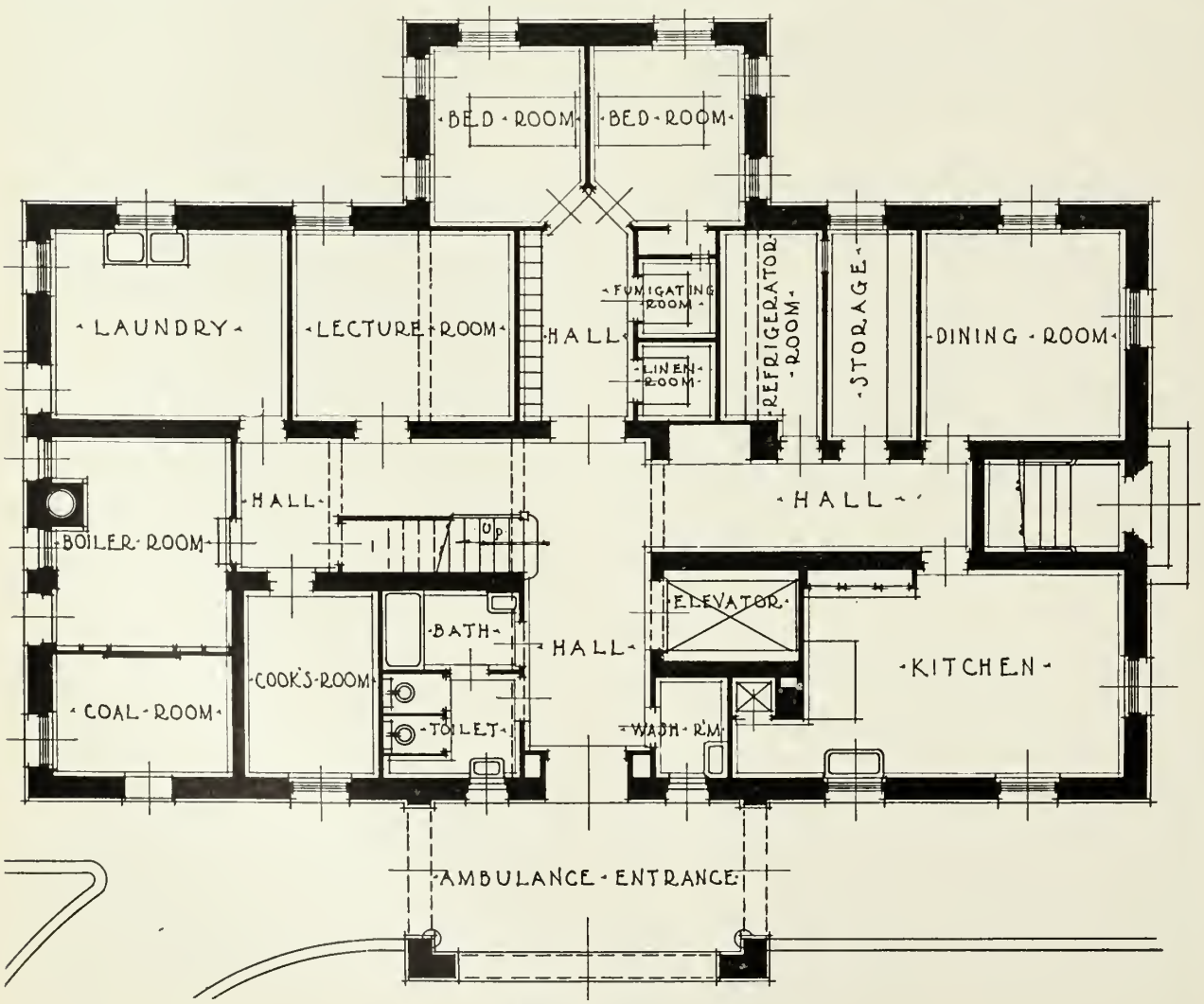

Fig. 2. King's Daughters' Hospital—Ground floor plan.

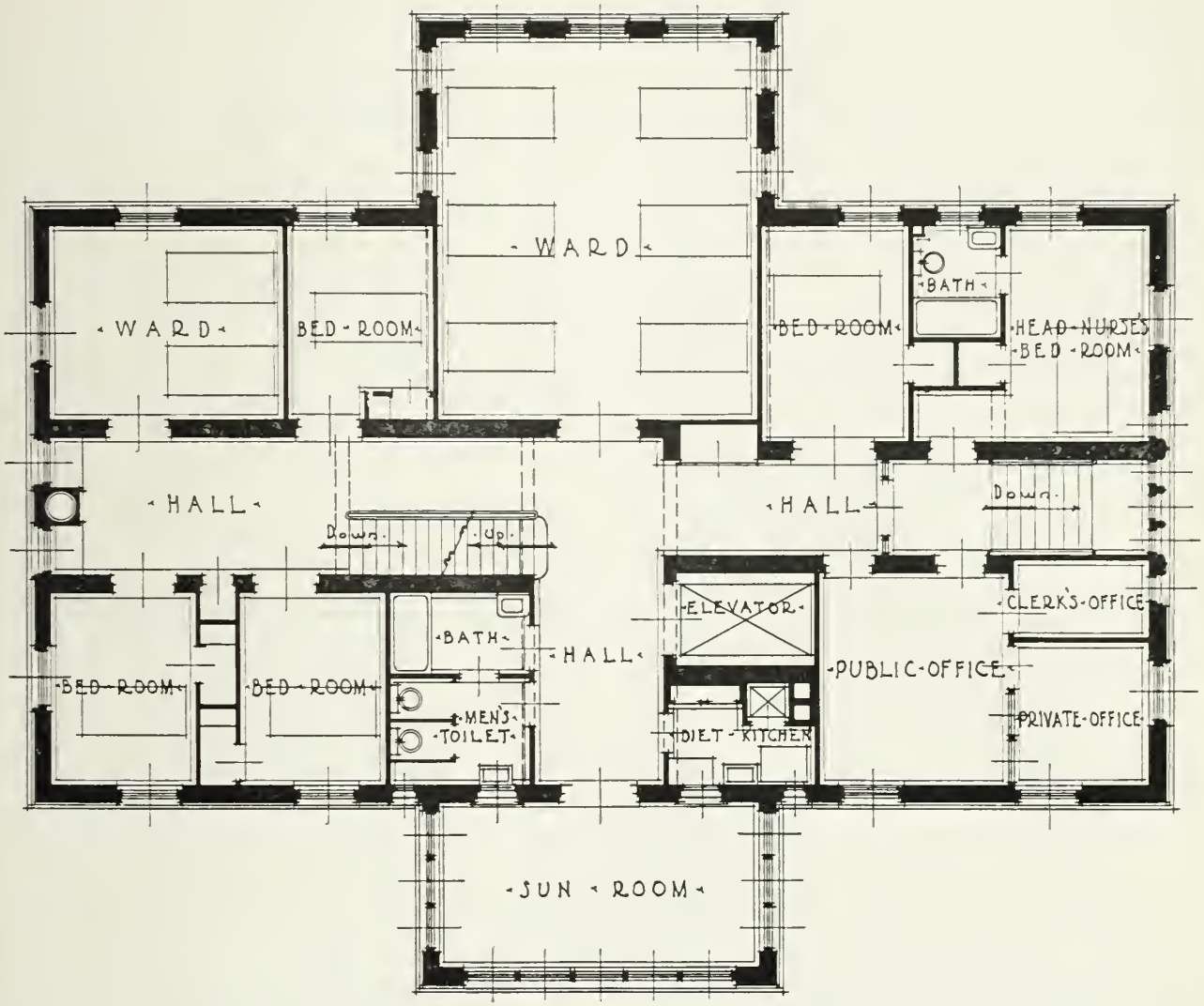

Fig. 3. King's Daughters' Hospital—First floor plan.

venience of nurses and physicians in caring for patients and to the comfort of patients themselves. All the private rooms and wards are provided with large windows, giving plenty of sunshine and fresh air. The sun porches on the first and second floors afford a comfortable place for an airing for convalescents in all kinds of weather. The operating room has a large overhead lighting surface, giving light from all directions at one time.

The architects have given special attention to sanitation, using a minimum amount of interior wood trim and providing sanitary composition floors, cove bases, flush panel doors, and even a cement balustrade on the cement stairway. The interior finish throughout and all exposed heating pipes and radiation will be white enameled.

A complete nurses' signaling system will be installed, so that a patient may call a nurse from his bed, the call being registered in the office and at head nurse's desk, and will not be released until the nurse answers the call and pushes the button by the patient's side.

The plumbing system is very complete, with toilet and wash rooms on each floor, and several private baths and a shower bath on the ground floor. A portable tub is provided, that may be used in any part of the building and filled or emptied in bath room on each floor.

Special pedal-operating hospital fixtures for surgeons will be furnished in wash rooms adjoining dressing and maternity rooms. The main kitchen on the ground floor and diet kitchens on each floor are equipped with sinks, cupboards, etc., and are complete and convenient in every respect. These rooms and the operating room are ventilated by means of exhaust fans as well as by outside windows.

The building will be heated by low-pressure steam, cleaned by stationary vacuum cleaning machine, and all garbage and refuse will be disposed of in basement by an incinerator.

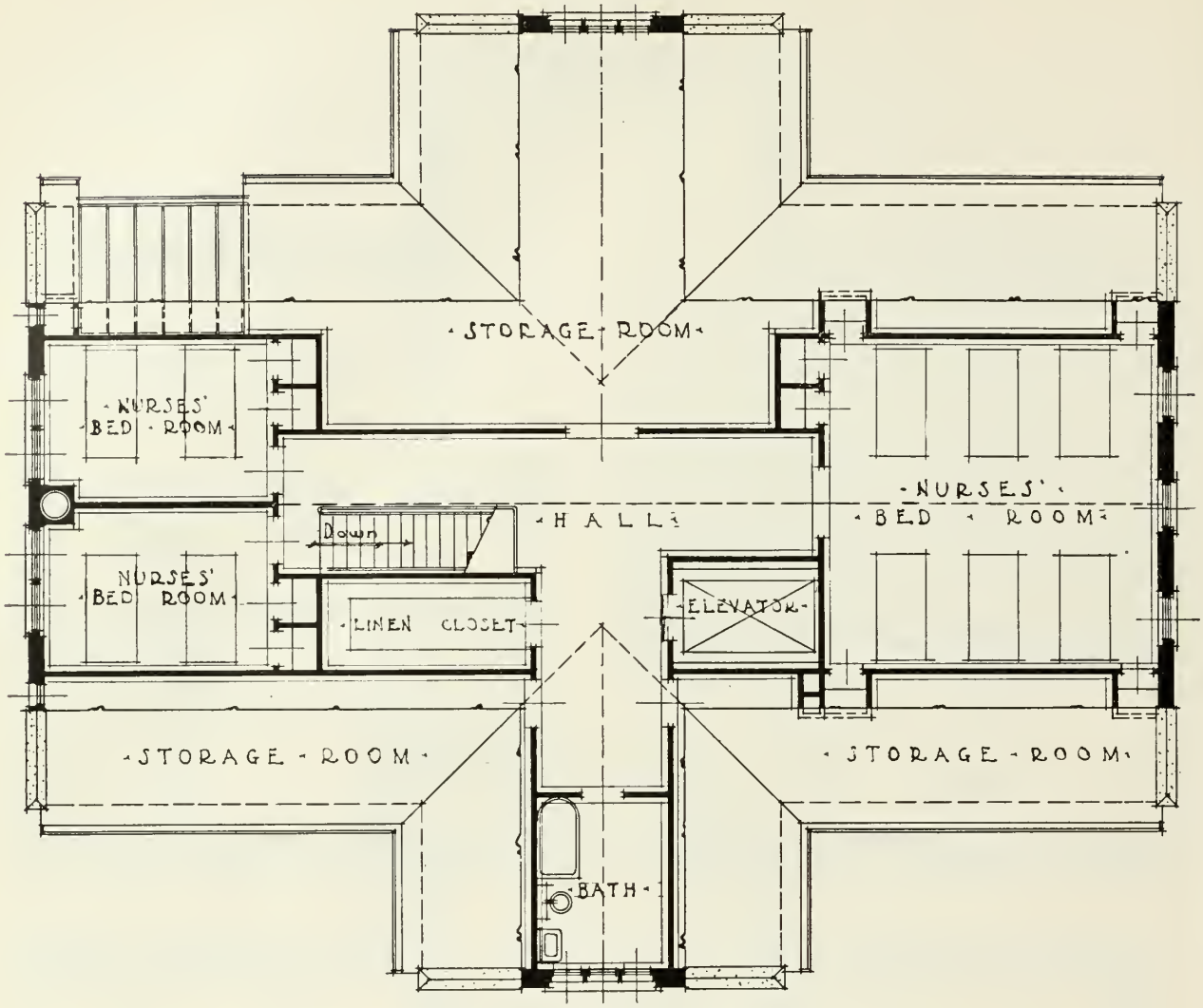

Fig. 4. King's Daughters' Hospital—Third floor and roof plan.

The building will have an elevator operating from main corridors and running to each floor, and also a dumb waiter service from kitchen to each floor.

FEEDING THE HOSPITAL—THE FOOD.[1]

Milk and Its Products—Butter, Its Uses and Its Substitutes—Their Food Values, Availability, and Physical Properties—Coffee and Cocoa and Their Uses in the Hospital.

By MISS LULU GRAVES, Chief Dietitian Lakeside Hospital, Cleveland.

PAPER III.

WHILE cheese contains nearly all the nutritive constituents that may be obtained from milk, butter contains practically the fat only. Most laws or ordinances require that milk shall contain on an average 3.5 percent of fat, but this varies according to the breed of the cow, her care, condition, age, etc.

The fat may be separated from the milk by allowing it to stand in a cool place until the cream rises to the top, because of its lower specific gravity, then skimming it off; or it may be removed much more completely by the use of a mechanical separator. The proportion of cream obtained depends on the method of separating, and with the machine can be regulated to obtain any percent of fat desired, the average being 40-45 percent.

Cream is regarded as a fuel food, a pint yields about 1,400-1,500 calories, and is a desirable form of fat to be used in the diet of the sick, for it is very easily digested. Dr. Hutchinson says, "Good cream (45 percent) contains as much fat as a similar quantity of most cod liver oil emulsions, and is usually much better borne."

Cream, however, is an expensive form of fat,

[1]This is the third in a series of papers on "Feeding the Hospital." Last month, "Milk, Butter, and Substitutes." Next month, "Vegetables, Fruits, Cereals, Eggs, Poultry, Fish."

and when used by a healthy person with a normal digestion is frequently taken because of a habit formed of demanding cream with cereals, desserts, etc., when milk would answer every requirement; or to gratify a craving for rich foods rather than for its nutritive value. It is not an uncommon thing for people to insist on cream, either plain or whipped, with a dessert otherwise as rich as should be eaten at the end of a heavy meal.

Devonshire, or clotted cream, is prepared by heating milk in deep pans in such a way that a rapid and very complete separation of fat is obtained. This form of cream contains as much as 60 percent fat and not more than half as much sugar as ordinary cream. For this reason it is particularly beneficial in the treatment of diabetes.

Butter may be obtained from either sweet or sour cream. That from sour cream has a flavor, due to growth of organisms during the ripening of the cream, which is characteristic of good butter. Naturally, butter made from sweet cream lacks this flavor, but is preferred by many, especially people of southern and central Europe. Butter without salt is also liked by these people, but neither the sweet not the unsalted butter is very commonly used in this country, except by the people who have come here from Europe.

Salt is not ordinarily used in large enough quantities to act as a preservative. The fact that sweet butter does not keep as well may be partially accounted for by the lack of bacterial action during the ripening and souring process. Considerable care is necessary to produce butter with an agreeable flavor. Many of our most modern dairies produce a very uniform and excellent flavor by introducing pure cultures of the right kind of bacteria and controlling the number of them.

While the essential constituent of butter is fat, it contains besides this small quantities of sugar, salt, and casein. If butter is kept for any length of time, this casein undergoes fermentation and the butter becomes rancid. Thorough washing removes much of this casein.

Carelessness in handling cream or butter is not infrequently practiced. In small dairies or rural communities, where a rigid inspection is not enforced, this is particularly apt to occur. As a result, a butter is produced which is too rancid to be put on the market until it is subjected to a process of renovation. It is melted and the bad odors removed by blowing air through it, or by other methods of applying heat and washing it. The clear fat, which is now quite sweet, is drawn off, mixed with milk and churned again. The result of this is a product which is much improved. The grade depends on the grade of the stock from which it was made, and it differs somewhat in composition from true butter and should not be sold as such. It is known as process or renovated butter. Tubs of what is known as dairy butter are often renovated butter.

Butter fat is rich in fatty acids, which are soluble in water—butyric, caproic, and capric; and others which are not soluble in water, oleic being the most abundant. Butter fat contains 40 percent of olein.

The fat of the human body has a large percent of olein. Olein has a low melting point, and is therefore easily digested and absorbed. Taken in connection with other foods, butter is a highly digestible and nutritious food. Cooked butter, on the other hand, is more apt to disagree, owing to the fatty acids liberated by heat, which are irritating to the digestive tract. For a weak digestion is should be spread on bread, or combined with some starchy material, which will aid in preventing its coating the walls of the stomach and retarding the flow of the secretions. Liquefied fats are sometimes administered to coat the stomach and prevent the action of corrosive poison. The effectiveness of this treatment is apt to be overestimated, as the membrane is already moistened with mucus, and it is difficult to get enough fat to coat the stomach sufficiently.

Oleomargarine, or butterine, is a substitute for butter in which part or all of the butter fat has been replaced by other animal fats, or a mixture of animal and vegetable fats. This combination of fats has properties similar to natural butter fat, though the manufacturer must look also for fats and oils that are cheaper than butter and that can be readily obtained.

Suet and lard have a higher percentage of stearin and palmitin, both of which have a higher melting point than olein. As stearin solidifies more quickly than the other fats, it is more easily removed, and the fats having a lower melting point are mixed with oils and varying quantities of butter to give the appearance of the natural article.

A perfectly wholesome and nutritious product has been obtained which is as easily and almost as completely absorbed as butter. While the best grades of butter have a finer flavor and are more easily assimilated than any substitute yet produced, a good grade of oleomargarine is more wholesome and palatable than a poor grade of butter. It is available for people who cannot afford the more expensive article, and it lacks the two properties before mentioned which may be detrimental in butter—namely, the butyric acid,

which may be irritating to the digestive tract, and casein, which may cause decomposition; so there is no logical reason for the rather widespread prejudice against it.

It might be well just at this point to mention some other forms of fat commonly found on the market and used for food. The composition of these fats is chiefly different proportions of olein, palmitin, and stearin, the same as are used in oleomargarine. Olive oil and Wesson oil have practically olein only. The preference given to olive oil is largely due to its flavor. It is no more nutritious than other oils and is much more expensive. Owing to its high price, it is adulterated with cheaper oils; 20-30 percent of foreign oil may be used and not be distinguished. In the United States the adulteration is usually cottonseed oil, and in Europe it is more apt to be peanut or sesame oil.

Cottonseed oil is used in enormous quantities in this country. Much of it is utilized in food material of some sort. Since it will stand a higher temperature without smoking than lard or butter, it is used a great deal for frying purposes, as well as in salad oils. Snowdrift and cottolene are combinations of cottonseed oil, and crisco is another which has been chemically treated to make its "cracking point" at a higher temperature. When the "cracking" or "burning point" of a fat is reached, it decomposes into fatty acids and glycerin; a substance, acrolein, is formed, which gives the characteristic odor to fried foods. It is this substance which causes fried foods to be hard for some people to digest, as it irritates the digestive tract.

Cocoa beans contain about 50 percent fat, and the greater part of it is removed in making chocolate. It is solid at ordinary temperature, and is known as cocoa butter. It more nearly resembles butter fat than any other natural fat on the market. It is not employed so much in cooking, but is used a great deal in making chocolate bars and coating chocolate candy. It is in considerable demand for medical and pharmaceutical preparations.

Tea, coffee, and cocoa have no logical connection with milk and milk products, but I shall speak of them here because it is a more convenient time to do so than may be found in the future discussion of food materials.

Both protein and carbohydrate are found in tea and coffee in very small quantities, but in a form which is not soluble, and therefore cannot be utilized by the body. They are in nowise a food, but cocoa and chocolate do contain nutrients which the body can use. All of them are stimulants, though their properties for stimulating are not equal; many adults do not notice any stimulation from cocoa or chocolate, and it is more apt to be noticeable in children, especially if taken in concentrated form or in large quantities.

The stimulating property in tea is thein, in coffee it is caffein, and in chocolate it is theobromin. Tannin, a substance in tea and coffee, interferes with the action of the digestive juices, and more particularly with the digestion of protein. In tea the amount of tannic acid increases with the time of infusion; the liquid should not be allowed to stand on the leaves but a very short time. The use of the tea ball permits of the desirable properties being dissolved and the leaves being removed before the tannin, which dissolves much more slowly, has become a part of the tea. A most delicate infusion may also be obtained with the samovar. In black tea some of the tannic acid is oxidized and made less soluble by a process of fermentation. This makes it less astringent than green tea, and there is present a little more of the thein and oil, which gives a flavor that is considered better by a majority of people. The difference in grades of tea is due to the difference in location on the plant from which the leaves have been taken. The small leaves at the tip end of young shoots are the choicest, while those larger and farther down on the plant are an inferior grade. Teas from different countries have different flavors. A blend of several varieties gives a better flavor and is more pungent. The use of milk or cream in tea is considered an outrage by connoisseurs; there is logic, however, in the use of orange, lemon, and other fruits if the brewing is done in a pot. The acid of the fruit somewhat neutralizes the tannic acid, though one does not get the natural tea flavor as completely when it is mixed with the flavor of the fruit.

The tannin in coffee is combined with caffein, and is found in smaller proportion than in tea; so much more coffee is used per cup, however, that the result is much the same. During roasting the aroma of coffee is developed and some of the acids driven off. Mocha, Java, and Rio are our common brands of coffee. Mocha produces a delicate, clear concoction; Java, a strong one; combined, they are a very good blend. The caffein is dissolved almost immediately, so the value of the percolator in making coffee is similar to that of the tea ball in making tea. Coffee is sometimes adulterated with chicory. One should not have to pay coffee prices for chicory, but it is otherwise a harmless adulterant. It gives a distinctive flavor which is liked by many in European countries and in our own southern states. Cafe au lait, used much by the French particularly, is made by combining a strong coffee, often with the chicory in it, with

hot milk. The proportion of milk used is much larger than that of cream ordinarily used, and, though the coffee is very strong, it is diluted to such an extent by the greater amount of milk that it probably has no more caffein than is in coffee made in the customary way. The use of cream in tea and coffee is condemned by some authorities on the ground that the tannic acid is precipitated by the cream, forming a hard precipitate, which is irritating and indigestible. Other equally eminent authorities say it is better to have this harmful substance made insoluble, so it is not absorbed by the body. We are apt to be advocates of whichever theory accords with our desires. A moderate amount of black coffee excites the flow of the digestive juices, thus giving it the nature of an appetizer in some instances, or a demi tasse at the end of a heavy meal may have value as an aid to the heavily taxed digestive organs. Taken in large amounts, tea and coffee are apt to be overstimulating, and are really nerve poisons for neuroarthritic patients. They are irritants in most cases of intestinal trouble. If used in excess, coffee is constipating; on the other hand, if taken in moderation, it may serve as a means of helping to get the required amount of water into the system and which might not otherwise be taken. To the average healthy individual, leading a comparatively active life, there is little danger in the use of coffee if not used to excess. Some time ago some experiments were made at Columbia University to determine the effects of coffee. Their conclusions were that small amounts of caffein increased the efficiency—for the time being at any rate, and no objectionable after-effects were found —and large amounts decreased it. This was more marked in those who were purely mental workers than in those who did some muscular work too. We have many cereal coffees on the market whose manufacturers claim much for them. As their name implies, they are made of some cereal or combination of cereals which has been parched and ground. It is true, they are not constipating nor overstimulating, nor in any other way harmful; neither have they any great virtue, as they have no nutritive value of any consequence. For one who is harmed by the use of tea or coffee and yet does not care for plain water, these substitutes may induce him to take more liquid than he otherwise would. Cocoa and chocolate have stimulating properties due to theobromin and caffein present, but they also contain fat, protein, and carbohydrate in large enough proportions to make them of value as food material; with the addition of milk they have considerable nutritive value. They are made from the beans of the cacao tree. These beans, which are similar in size and shape to almonds, are separated from the long pod and fermented for a few days in order to modify the bitter taste. They are dried in the sun and roasted to develop the odor and flavor and give them the brown color. Next the hulls are removed and the kernels crushed. The hulls have been largely used as an adulterant for spices or in making a cheap grade of cocoa, and they have some value as cattle food. The kernel is ground to a powder, and, if cocoa is desired, most of the fat is removed, the amount remaining in the cocoa varying with different brands. In the making of cocoa by the Dutch process, it is treated by sodium, potassium, or magnesium in such a way that the fat which remains is more readily emulsified, and the alkali present in the cocoa causes it to remain suspended in the water or milk when cooked, not settling to the bottom of the cup so quickly. The alkalis present are not harmful, and in instances where mineral salts are needed would be beneficial. Van Houten's cocoa is made by this process, and has a higher percent of these salts than any other. The emulsion of the fat may help it to be more easily digested. In the German process ammonium is used. This gives a purer cocoa, as the ammonium compounds are driven off later. Cocoa may be adulterated with ground hulls, starch, or by having more fat removed than should be, as cocoa butter is a high-priced article. Because of the starch present it should be cooked long enough to make the starch grain soluble. Putting cocoa into a cup and pouring hot liquid over it will not cook it sufficiently. If little, or none, of the fat is removed when the bean is ground, chocolate is produced. Many people cannot assimilate so large a proportion of fat, so it is a better food when used with some other material. Even sugar added in candymaking gives a better product than the chocolate alone. Chocolate has been subject to considerable adulteration. Cheaper fats, such as beef stearin, may take the place of cocoa butter; seeds may be ground up with the cocoa bean, and even an imitation chocolate has been made from gelatin, sugar, iron oxid, and aniline dye, with a coating of shellac varnish to give the gloss of the chocolate fat. Theobromin is milder in its effects than thein or caffein, but it should not be given to young children in candy, pudding sauces, or other concentrated forms, especially if they be nervous and excitable.

An operating table on wheels is the latest idea in army hospital equipment. It is supplied with all the conveniences of a room in a modern hospital. There is an overhead light of great power, so that operations may be conducted at all times, an x-ray equipment, and also an ultra-violet ray water sterilizing apparatus, which will supply drinking water for the hospital patients.

THE HOSPITAL KITCHEN.[1]

Most Important Part of the Institution, From an Economical Standpoint, Is Usually Equipped and Administered Unscientifically—A Proper Range—The Steam Table—The Steamers—Dishwashing—The Urns—Miscellaneous Fixtures.

WOEFUL indeed and terrible to contemplate are some of the crimes against common sense perpetrated under the guise of scientific designing when applied to the long-suffering hospital kitchen. In days gone by the hospital kitchen was not designed—it "just done growed," like Topsy; then it began to be designed principally by persons whose education, in the art of preparing and serving food to a large number of people, had not had the chance to develop by practical work beyond the theoretical stage. Nowadays the dietitian is with us, armed with sanitary and antimicrobe crusade ideas which are excellent were she not prepared to carry cleanliness even beyond godliness, so to speak.

One good lady, not long ago, in conference with an experienced practical designer of hospital kitchens, declared point blank that under no circumstances should a canopy go over the range in a large new hospital kitchen. "No, sir; a canopy is a dirty, horrible contraption, and none shall go into our kitchen," said she.

"But, my dear madam, what will become of the steam and greasy air generated by frying and boiling? Every time one of your six oven doors is opened, greasy hot air comes out," gently suggested the perplexed kitchen expert. "You must admit that you cannot cook without producing steam and greasy air; you know the contrary is an impossibility. Now, that air being indisputably there, you must dispose of it somehow. If you don't suck it up under the canopy and conduct it to the open air, without coming in contact with the air and the walls of the kitchen, what on earth are you going to do with it?"

"Well, I won't have a canopy, and the hot air can go out of the windows; there are plenty windows," said the dietitian.

"But the walls and everything in the kitchen will become greasy, and dirt will adhere to them; everything about the kitchen will be greasy, and just think of what the poor help will have to stand with a six-oven center range pouring out heat all day and only the ventilation of the windows to carry it off. Your help will die off on your hands if any of them stay long enough, which they probably won't."

Is that lady convinced? Not when last heard from. She still persisted that a canopy is a dirty thing, and evidently prefers to smear up the entire kitchen with greasy dust and asphyxiate the help, all on account of a supposed breeding place for microbes in a canopy, where no self-respecting microbe would live on account of the uncomfortable heat.

Now, had she insisted that the canopy must be of copper, so as to be durable and easily cleaned, owing to its noncorroding qualities, and had insisted on cleaning it once a week, she would have been all right. While to the common kitchen expert she might be slightly fine-haired in her demands, yet there would be no valid arguments against her getting what she wanted as far as practicability and good results were concerned; but when the theory is advanced that it is better to spread and smell vapor, grease, and heat all over a kitchen than to catch it where it is produced and force it to the open air by the combination of a canopy and a strong draught, so that none of it gets into the kitchen proper, it is time for common sense to step in, in the person of the board of trustees, and to banish theory in the person of the so-called expert dietitian.

The above is not fiction. It is unfortunately true, and, if the writer's limited personal experience yielded this sample of theory, how many other equally ridiculous theories referring to other items of kitchen equipment must have been perpetrated in the name of advanced modern, scientific, sanitary, dirt-hunting, microbe-haunted dietetics!

Yet we must not entirely blame our dietitian for declaring that a canopy is a "dirty contraption." Either she personally or the person who taught her had had a canopy which *was* a dirty contraption, which a canopy can easily be.

People put a canopy over a range, and expect that in some miraculous way the smoke and greasy vapor will go away through a small hole without any outside influence to induce it to do so.

Many canopies are installed all over the country which never fulfilled any mission except that of deflecting the heat down on to the cook and furnishing a lodging place for a good, thick coating of black, greasy deposit of the most inflammable nature. People who have suffered from this class of canopy, of which no doubt our dietitian is one, have reason to think they should eschew canopies because they do not know that it is not the canopy that is to blame, but the ignoramus who failed to connect the canopy to a flue having the proper

[1]This paper is prepared by a thorough-going equipment engineer, who for personal reasons desires that his name shall be withheld. THE MODERN HOSPITAL knows him and his ability, and vouches for both.—Ed.

area and draught provided to carry off the vitiated air of the kitchen.

A hospital kitchen is, after all, a simple thing compared with the kitchen of a high-class hotel, and the laws governing the equipment are of the simplest, and apply to the large or the small hospital and to those with unlimited or limited means equally and impartially, and, like death and taxes, we cannot escape their operation.

The first law is that you must have a given-sized flue with a given amount of forced or natural draught to carry away a given amount of heated vapor and grease-laden air generated above and around the kitchen range. The proper person to estimate the amount of flue space and fan capacity necessary to carry away the vitiated air in any given-sized kitchen is a food service engineer, such as are employed by the first-class kitchen equipment houses. The properties of the gases and other products to be taken care of in kitchen ventilation are not the same as in room ventilation—their density is greater, and consequently greater draught capacity is necessary to remove them. Another thing—a fan cannot drive these gases out; they must be *pulled out,* and it is only when the foul gases are pulled out through flues of sufficient capacity that we get the properly ventilated cool kitchen, free from odors or deposits of grease, that we ought to have and can have just as easily as not if we go about it right. There is absolutely no excuse for any hospital kitchen not to be sweet-smelling and cool with the modern knowledge of how to do it and the available appliances with which to do it.

The second law laid down for us is that dust and dirt cannot remain in a place which is accessible to easy cleaning, provided we furnish the human energy to clean it.

The third law is that dirt is visible on a white surface, but is not so visible on a darker colored one, and the fourth law is that a smooth surface does not as readily form a resting place for particles of dirt as a rough one, and the harder that smooth surface is the easier it is to wash off.

A right-angled corner is not accessible, and consequently today we round them. Our walls are made of white tile, or hard cement painted white, or hard white plaster with white varnished paper, according to the size of our pocketbooks. Our floors we make of cement and cover them with tile or some special surfacing impervious to grease or damp, and absolutely smooth. So far no dirt can lay itself down to rest and offer an abiding place for tired microbes to recuperate and perpetuate themselves.

One thing remains, however—our floor cleaning, and here is where a radical change over the old formula takes place. In former days all kitchen equipment sat on the floor, and dirt accumulated below it and in the right-angled corner formed by the floor and the wall of the piece of equipment. Today we say everything must be 10 inches above the floor, so that we can take a hose and flush out the place. Only the range must remain solidly seated, and that is today raised, say, 4 to 6 inches above floor level, and given a concrete rounded base, so that the range sets on an island above the water used in flushing.

The apparatus necessary to the hospital kitchen varies with the size of the hospital, but it will always include a range, and, as that is the hardest worked item of the equipment, it behooves purchasers to see that they get something able to stand hard work day in and day out, with the minimum amount of repairs. Especially is this the case where natural gas is used for fuel, as is the case in many cities today.

THE KITCHEN RANGE.

To stand hospital work, a range must be built approximately as follows, any specifications less heavy and less exacting in workmanship being bound to cut down the wearing quality under the stress of continuous heavy heat:

For the body of the range, No. 12 gauge cold rolled steel, riveted to ¼x1¼-inch angle iron on each corner, should be used, and the steel should be flattened and leveled by hand before riveting to make a thoroughly good job. The ovens should have sides of not less than No. 10 gauge steel, closely riveted to front and back of range, and, unless the bottoms of the same thickness of steel are braced on the bottom with ¼x1¼-inch channel irons, riveted to the bottom of the oven and held by at least ⅜-inch king bolts, the ovens are almost sure to warp after some little usage and then the whole range suffers.

All oven doors should have malleable iron frames, and should be capable of latching both partly open and close shut, and the doors should be braced so as to be capable of sustaining a weight of at least 500 pounds or over when flat open.

The front and back flues should be lined with 1-inch fire brick, and the end and bottom flues with not less than ¼-inch asbestos mill board.

The fire box, if lined with fire brick, should have 6½-inch fire brick on three sides and 2½-inch fire brick on the oven sides, and should be fitted with revolving grates.

Wherever natural gas is available, it is always best to use a coal range fitted with natural gas burners, because the burners can be removed from the fire box in about ten minutes and the range used for coal in case of failure in the gas supply.

There are not enough heat units in artificial gas to give satisfaction in a coal range, as a rule, unless a very large volume is used, but natural gas, with its large number of heat units, is cheaper than artificial gas, and much cleaner and more convenient than coal.

For heavy work the French top is always preferable, and the plate over each fire box should weigh not less than 90 pounds and have a 10-inch hole and cover. The plates over the ovens should be ribbed to stiffen them, and should be supported by a cast-iron ventilated brace placed on the top of each oven to prevent their warping. A top of this class will stand any amount of hard banging and heat without damage, whereas the lighter variety soon gets out of shape, cracks, and goes to pieces under the heavy duty of a hospital.

A range such as described above will have a net weight of over 1,350 pounds for each section, 4 feet x 3 feet 4 inches, and it may be taken as a generally correct principle that every pound of weight less for the same sized section of range simply means that much less durability.

Beware of the range which is praised because its ovens get hot quickly; it takes less time for heat to penetrate thin than thick metal, of course, and equally of course these ranges can not last as long. At the same time there is a point where the metal becomes too thick to properly transmit the heat, and ranges are not built in practice with oven walls more than No. 10 gauge steel.

In the purchasing of a range it is easy to be deceived unless the thickness or weight of metal and fire brick are specifically given. The pictures look the same, and the expression, "very heavy steel," means nothing more than does "heavy cast-iron top;" but that "the plate over the fire box shall weight not less than 90 pounds" means something, as do the other figures given above, and, with them before one, there is no excuse for being deceived by the glittering generalities of the glib salesman, whose goods at a cheaper price are always "just as good."

It does not need expert knowledge to know that if two sections of range of the same size differ from 300 to 400 pounds in weight, there will be a corresponding difference in the time they will stand the strain of every-day use, and, although one is less in cost than the other, its short life really makes it very much the more expensive in the end, besides the trouble and annoyance of stoppages for repairs.

THE STEAM TABLE.

Another item which goes into every hospital kitchen is the steam table, and here again cheap, trashy material can be "worked in" unless the specific gauge of metal is specified. If a steam table water pan is to be made of copper, which is generally accepted as the best material, it is important that if the table is 5 feet long or less, the copper pan be 24-ounce copper; if the pan is of greater length than 5 feet, 32-ounce or heavier copper should be used. It is extremely inadvisable to have a copper pan inside a steel one, because if a leak occurs it is not visible, and the space between the metals fills up with dirt and damp, and rusts out the steel. It is better to have a steam table pan of copper, braced with angle-iron supports at suitable distances; then any leak immediately is visible, and can be taken care of before any damage is done. Many cheap steam tables are made of a thin copper lining inside a steel pan; it takes only the dropping of a fork or some other sharp-pointed article to puncture this thin metal and the steel pan speedily rusts to pieces.

The weight of the copper determines the price of the table, and, when two tables of the same size vary greatly in price, look for the "nigger in the wood pile" at once, and he will be easy to find in the thickness of the copper, the bracing, and the workmanship.

Cast-iron panels, enameled with white German porcelain enamel, which is exceedingly hard and tough, are coming into universal use owing to the ease of interchanging them and their sanitary qualities. The German enamel is put on dry, in contradistinction to the ordinary enamel, which is put on the metal as a wet paste, and the former is much more expensive. A simple test of enamel is to put vinegar on the panel, when the wet process enamel will discolor, while the dry will be unaffected.

THE COOKERS AND STEAMERS.

A great deal of hospital cooking can be done in steamers, and the closed compartment steamer has the advantage of using dry steam and not allowing any to escape in the room, besides the assurance that no food in one compartment can absorb any odor from food in the other compartments.

The stock kettles and steamers should be set in a steel drip pan, properly drained, and it is advisable to have a canopy over it so as to carry off the heat and keep the steam and odors from the kitchen.

THE DISHWASHING.

The dishwashing should be done by power machines, of which several good ones are on the market, provided there are enough dishes to justify it, but, as a rule, the dishwashing is done in the ward kitchens and the dishwashing in the general kitchen is consequently negligible.

THE URNS.

Coffee urns should be very carefully chosen, because, owing to the strains of heating and cooling, coffee urns soon go to pieces unless built to a specification not less strong than about 35-pound cold rolled copper, thoroughly tinned on the inside. They should be mounted on cast brass or bronze bases, with feet at best 6 inches high, to prevent the attendants burning their hands when regulating the steam valves underneath the urns. When a battery is used, the center elevated water urn should be on feet which are attached to the feet of the other urns, and not to the bodies, so that one of the other urns may be removed for repair without putting the whole battery out of commission. Seamless copper steam coils should be used and should be tinned inside. All connections should be tinned inside, and the faucets should be silver plated and easily taken apart for cleaning.

Urns of these specifications will last indefinitely and give good satisfaction, but the cheaper urns, which cannot be built anywhere near these specifications at the prices asked for them, will soon warp and leak, and usually go to pieces.

THE KITCHEN TABLES.

Tables for clean dishes, vegetables, and pantry work are best made of 1¾-inch sectional maple, mounted on iron pipe legs. The cooks' tables are preferably made from polished steel, and when chopping has to be done on them a chopping board is used. The scrap table should always be made of galvanized iron, as there is then no trouble in keeping it sanitary. Under no circumstances should a scrap table be made of wood covered with metal, because the joints are bound soon to leak, and a filthy condition is created between the metal and the wood, as the damp permeates from the leaky spot over the entire surface of the wood beneath the metal covering.

For tuberculosis and contagious hospitals it is possible to install a method by which all the scraps of food as well as the dishes shall be sterilized before reaching the scrap tables and being handled by the attendants or put in the garbage. The writer does not know of such an actual installation, but has seen the plans for one which appeared perfectly simple and practical.

SOME CONCLUSIONS.

The kitchen is the department of a hospital where money can slip away faster, without the cause being detected, than in any other part of the institution. A badly planned kitchen necessitates extra help to get the work done, and one helper means an expense of not less than $500 per annum.

In too many cases the kitchen equipment plan is not made before the size of the kitchen is determined, so that usually there is not room for adequate equipment, or it may be wrongly located, so that efficient service cannot be got out of it.

From an economic point of view, the kitchen is the most important part of a hospital, yet in many cases nothing is done about choosing the equipment until the hospital is built, and it is too late to get the few extra feet of room, or the change of location of a door, window, or flue, which changes may mean the saving of daily expense as long as the hospital exists—all because, why? Because we have been trained to think that kitchen equipment is a thing you go out and buy, bring in, and set up on the floor like chairs or tables, or any other furniture. We don't wait until the hospital is finished to buy our plumbing. We don't wait until the hospital is completed to order our electric lighting system. We design these systems when we design the walls, and we let the contracts for them when we let the contracts for the building.

But the poor kitchen, except in occasional cases —happily becoming more frequent every day— waits, and no provision is made for the large number of water, steam, and drainage connections whose location cannot be determined unless the equipment has been specified and definitely decided on, and the hospital has to pay the added cost of installation caused by the cutting of holes in concrete floors and running pipes to inconvenient connections instead of having all connections roughed in during construction, as is invariably done for the plumbing, gas, and electric contracts.

Flues large enough to properly ventilate the kitchen and carry off the smoke are the exception in the average hospital plans, because the usual laws for ventilation do not apply, and the designer of the flues is not posted on the peculiar idiocyncrasies of kitchen vapors. The ventilation question can easily be threshed out before the hospital is built, but it is quite another matter to enlarge a flue already in or to put one in where it was forgotten.

With the exception of a few specialists, the average architect cannot be expected to know everything that is necessary to the proper designing of a kitchen equipment, and the architect should call in one or more equipment houses of high standing as his advisers. The board of trustees should meet with the representatives of these houses, and should decide on the best plan and the best equipment, and make the contract the same as they do the other contracts for the building. Only in this way can really satisfactory equipment be secured and a plan decided insuring economical operation of one of the most important departments of a hospital.

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Pupil Nurses a Hazard to Patients.

Dr. D. S. Fairchild, of Clinton, Iowa, one of the best known surgeons in the West, recently stated in a medical paper that patients were being sacrificed in the interest of nurse training in his home city.

Dr. Fairchild, who is one of the vice-presidents of the American Medical Association, president of the American Association of Railway Surgeons, and editor of the journal of the Iowa Medical Society, was promptly refused admission to the hospitals of Clinton, and the hospitals, nurses, and some of the members of the medical profession had a good deal of hysterics about the doctor's charges.

In a final analysis, becoming angry with Dr. Fairchild will not disprove any of the charges that he has made. It seems to us the question is whether what he stated was true or not—namely, that the training of nurses was a hazard to patients, and, if the charges are true, whether there is a cure for the situation.

It is very certain that the training of pupil nurses, coincident with the care of patients in hospitals, is an extra hazard to patients, and it is quite as certain that many patients lose their lives every year at the hands of pupil nurses, but it is not so sure that there is a cure for it. These nurses must be trained, and they must be trained in the handling of patients; therefore, they must handle patients, and no pupil nurse can handle a patient as well as a trained graduate nurse, of course; therefore, it goes without saying that patients are not getting the best care that could be provided for them when they are in the hands of a pupil nurse. It seems, therefore, that Dr. Fairchild's charges are entirely true that pupil nurses are a hazard to patients, and many will be in entire sympathy with Dr. Fairchild's attitude in drawing attention to the matter.

We are entirely too careless in the operating rooms, and too many pupil nurses are put into operating rooms who are too stupid ever to learn operating technic, too many who are too careless, and who have not been long enough in the school to have acquired the proper mental attitude toward the profession of nursing.

The operating room and the maternity department are two sections of the hospital where lives are at stake every instant, and a wrong step can be taken by a nurse before anyone can interfere, whereas in most of the other departments of the hospital there will be time enough after the nurse makes a mistake to see to its correction.

It is presumed that it was Dr. Fairchild's idea to call attention to this matter of nursing care in order that it might receive more attention than it had been receiving. If some of the hospital superintendents who have stopped long enough to abuse Dr. Fairchild for his charges, and if some of the trustees who have barred him from their hospitals would spend as much time thinking about whether his charges are true or not as they have in abusing him for making them, more good would be accomplished.

Maternity Hospitals.

A good deal of activity is developing in various parts of the country about maternity hospitals. Many are proposed, and the question of the value of this class of institutions is a common topic among hospital people and health workers.

It isn't very long ago since the name "maternity hospital" was a reproach to a community and a stench in the nostrils of decent people. These institutions were abortion shops, or, at best, places where unfortunate girls were sent to have their illegitimate babies, and the managers of them often represented a most pernicious form of blackmail operated against the supposed fathers of these illegitimate children. These places were often connected with commercial baby farms, and were the nucleus for a traffic in infants that frequently showed itself as a form of blackmail against husbands who were in trouble with their

wives, or who were being made the scapegoat of unjust charges brought by girls under the insidious influence of these hospital "doctors" and managers. Too often these institutions were the sources and fat feeding grounds for "white slavery;" unfortunate girls who had got rid of their babies were passed along to the underworld for immoral purposes. Many of these institutions exist today in nearly every community, and are quite as bad as they were in the old days.

But things are getting better. The villains engaged in this kind of commerce are being driven out of business, and where they still persist their activities are lessened by the scrutiny of health officers and welfare workers.

All this ignominy clouded over maternity hospitals has not hidden the fact that these institutions, honestly conceived and properly operated, are perhaps the most valuable assets in our modern sanitary regime. There is no doubt that many thousands of women are handicapped for the rest of their lives, some of them rendered sterile, and others made chronic and incurable invalids, by incompetent doctors and ignorant, filthy midwives at the time of their first confinement. It is probably true that more than 50 percent of women suffering from incurable endometritis, pelvic ptoses, and unremedied perineal lacerations are thus invalided as the result of incompetent care at the time of confinement. Some months ago we published part of a report made by Miss Van Blarcom, of the New York Commission for the Prevention of Blindness, in which it was stated definitely that 50 percent of the blind owe their misfortunes to incompetence and carelessness at the time of their birth. Conservative obstetricians and pediatricians agree that, at any rate, from 20 to 30 percent of blindness is due to this cause.

It can well be conceived that, in view of what we know about the harm that these institutions have done, and the harm that has come from incompetent care of child-bearing women and newborn babies, the task of creating good maternity hospitals is perhaps the most worthy that good women and wealthy men can engage in today. The maternity hospital is one of the very few classes of institutions in which specialization is really demanded. If there is ever a time when a woman should be free from possible infections and away from their source, it is at the time of her confinement; and the new-born baby is probably never so receptive to insidious infections as at the moment of and immediately following birth. Therefore, unless the maternity section of a general hospital can be most carefully isolated from the other divisions, and unless a technic can be instituted that will meet the highest obligations of this day of medical science, it is better that these hospitals should be entirely separate and distinct institutions, removed from possibilities of contamination by people suffering from infectious diseases of all kinds.

New York has recognized this by the institution of the New York Lying-in Hospital, the Manhattan Maternity Hospital, and the Sloan Maternity Hospital, and the other hospitals of New York have recognized the propriety of such an arrangement by sending their maternity cases to these two hospitals. These hospitals, in turn, have recognized their further obligations to the community by giving periods of obstetric training to the pupil nurses of the general hospitals of the city. This course should be pursued in every large community; in fact, no maternity hospital can give a complete training to the pupil nurse, and arrangements for affiliative service should be made everywhere. General hospitals should be more than glad to participate in these affiliative arrangements and to serve the maternity hospital by permanent agreements that will assure to these institutions plenty of senior-year pupil nurses.

Let us have more maternity hospitals, but let us have them right, so that they can live down the reputation of the past and so that they can take the best possible care of the most dependent, helpless, and valuable classes of our people.

A Need in Tuberculosis Hospitals.

During the past four months I have had occasion to visit, for one reason or another, fourteen tuberculosis hospitals. Some of these were conducted by states, some by municipalities, and some by private philanthropy. One condition that I found dominant in nearly all these institutions seems to me to justify comment. In every single case I found that these hospitals are giving good care to their patients; patients are well nursed, well fed, and their medical requirements are attended to along the lines laid down for the treatment of tuberculosis by approved scientific methods.

In five of these hospitals visited I had occasion to make an official inquiry that necessitated the taking of testimony along certain lines from medical officers, heads of executive departments, nurses, the lesser employees, and patients. In one or two cases there had been rather irresponsible charges of neglect of patients, in one form or another. These official inquiries gave me an opportunity to ask questions that would not have been possible under other conditions. In no single case did I find the charges of neglect supported

by anything like unbiased testimony; but in every case I ascertained why the charges had been made, and I was able to draw conclusions as to the merits of the charges.

Without naming any institution and without going into detail, I think it might be profitable for me to give, from memory, the testimony of a typical patient witness. A number of questions were asked, bearing on the specific case, and then the following dialogue occurred:

Question—Are you happy here?

Answer—Why, yes; I think so.

Question—Do the officials and employees do all they can to make you comfortable and contented?

Answer—Yes; I think they do.

Question—You are an up patient, I believe you said?

Answer—Yes; I have had no temperature for some time and I am up all day.

Question—Won't you tell me what you do with yourself? Give me the history of your life for an average day?

Answer—I get up in the morning, wash and dress, and then have breakfast; then I sit around awhile and occasionally walk out into the woods; then I come back and have dinner; and then I sleep a little while, if I can; and then I sit around awhile and then I have supper; and then I sit around awhile and go to bed.

Question—Don't you read any?

Answer—Yes, when I can find something to read.

Question—What other diversion do you have?

Answer—Nothing that I can think of just now.

Question—This seems a beautiful place to live, and it would seem that you ought to be really happy here. Are you happy and contented?

Answer—Yes, but it is very lonely; sometimes I can hardly stand it.

Practically these questions were asked of more than fifty patients and almost invariably there were the same answers. I knew the answers I would get the moment I looked at the patient. The same general answers were given by employees and nurses and the help. They were all happy and contented, but they were all "very lonely," and, when they were not performing some duty or doing some routine thing that they had done every day of their existence in the hospital, they were doing nothing, and were "very lonely."

Most of these hospitals are removed from the lively, busy places of life; most of them are surrounded by beautiful country; most of them have trees and flowers and lawns; many of them have water about them. In very few instances are the patients allowed to go into the villages or associate with the neighbors.

Medical men in the cities, visiting and district nurses and dispensary officers, claim that they are unable to persuade patients with incipient tuberculosis to go to the tuberculosis hospitals and stay there until they get well. In many cases they go for a short period and leave. Why is this? I have found out the secret.

Absolutely nothing is done in these hospitals to afford patients entertainment, diversion, and occupation. It seems to me that nearly all these hospitals have too many doctors, and that these doctors do almost nothing that the nurse in the case could not do. There is usually a hard and fast rule for the treatment of these patients. If they have a temperature, they are kept in bed and they are given a certain diet. If they have no temperature, they are allowed to be up and are given another diet. Some of them are given a little medicine, but these medicines are routine practice, and the nurse attends to giving them in most cases and generally determines when they are to be given. The doctors go about and make an occasional examination of the lung or the region of the active process, and they may leave a general order about the patient. This happens, as a rule, about once a week. But absolutely nothing is done to divert these people and keep them contented. The result is that they all are "very lonely," and they leave the institution as soon as they possibly can, and some of them leave long before they ought to do so.

If the conditions in these tuberculosis hospitals are as I have given them, and are as I think I found them, do not the facts point to the necessity for a very great revolution in the care of tuberculosis patients in sanatoriums?

It seems to me that in every tuberculosis hospital there ought to be someone with the specific duty of directing the entertainment and diversion and occupation of the patients, and this work should not stop with patients. It ought to include the officials of the institution and the employees and the nurses. Many of these hospitals have farms attached to them and dairies and poultry flocks, many of them have large sheets of water adjacent to them, and many of them have forests all around them. Some of these patients, of course, are confined to their beds part of the time, some of them all the time, and some of them sleep in the forenoon and afternoon for want of something better to do.

We have come on a time in the treatment of tuberculosis when medical science has decided that useful occupations in the open air are good for some of these incipient patients, and it seems to me the work of physicians should include the prescribing of the character of occupation and

the amount that each patient should do. In a few institutions they are already asking patients to do a little work about the place—some of it out of doors. In three institutions that I visited I found incipient patients were asking to be allowed to work in the garden, among the flowers, or in the truck garden with the vegetables.

Why cannot a regular scheme of occupation and diversion and entertainment be introduced in these hospitals? Each institution could have a professional entertainer—at least someone who could be charged with the specific duty of finding diversion and entertainment and occupation for everybody. The person so chosen must of necessity be good-natured. He or she must never have "the blues." He or she must be versatile and accomplished in many things, so that a great diversity of things to "do" could be instituted. Such an entertainer as I have in mind, it seems to me, would best be a woman, of large sympathies, and one of broad imagination. Any special training that she had had would be an advantage, and the more education she had had the better would be her service. She could think up places to get reading matter for bed patients, and she could find someone who could read to bed patients occasionally—young women in the office, for instance, or the storekeeper or the housekeeper, or a nurse; she could have games, such as checkers and dominoes and cards, for bed patients; she might have cribbage games for some of them, and those who did not know how to play could be taught; she could have chessmen, and get up little tournaments and offer little simple prizes that some of the patients could make. She could take the up patients walking in the woods, and equip herself to entertain them with nature stories and furnish them with the literature that would enable them to study nature—the woods, the flowers, the birds, squirrels, and rabbits, and even the ants and bugs. These jaunts could be made most interesting and entertaining.

For incipient cases, congenial occupations could be found, and the doctors could prescribe the number of hours and the character of work that incipients could do. A great many of these people would like to be charged with the care of parts of the garden and be responsible for the thrift and growth of their parts, and they could be made to take great interest in that kind of work. Then, for everybody alike, evening entertainments could be gotten up, such as little theatricals or charades, and those who were in physical condition to do so could participate in these little festivities; and they could have rehearsals, which would be even more "fun" than the formal entertainments themselves. The officials of the institution and the nurses and employees could be made to take an interest in such entertainments if they were properly exploited and given the right sort of a setting. A few tuberculosis hospitals have already recognized this great need to the extent of giving an occasional moving picture show. These are excellent in their way, but they come only at long intervals, and what are the people to do in the meantime?

If some institution will take up this matter of entertaining and diverting and giving occupations to the people, they will find that it will pay in many ways; they will have less trouble finding employees, and their employees will stay with them. They will soon find that incipient patients will come to their hospital and will stay there, and they will not have to complain, as nearly all of them do now, that they are unable to keep any except advanced cases, because the others go back home.

JOHN A. HORNSBY.

Our Cover Design of the Massachusetts General Hospital.

Heretofore it has been the custom of THE MODERN HOSPITAL, with a few exceptions, to picture on the front cover some new hospital which, for one reason or another, seemed entitled to special consideration. This policy will be subject to variation in the future, and occasionally we shall present pictures of famous institutions in all parts of the world. This month we present the famous "Bullfinch Front" of the Massachusetts General Hospital in Boston. This magnificent institution, next to the oldest in the United States, was founded in 1811. Its records tell the thrilling story of American medicine for more than a century, and the brightest page of them all would chronicle that momentous day, October 16, 1846, when ether was born. On that memorable day, probably the greatest for suffering humanity since that other day on Calvary, John Collins Warren did a surgical operation on one Gilbert Abbott after he had been put to sleep by William Morton by the use of ether made by Dr. Morton.

Oliver Wendell Holmes coined the word "anesthesia" to define the sleep, and later on Weir Mitchell wrote of it these pregnant lines:

"Whatever triumphs still shall hold the mind,
Whatever gift shall yet enrich mankind,
Ah! here no hour shall strike through all the years,
No hour as sweet, as when hope, doubt, and fears,
'Mid deepening stillness, watched one eager brain,
With Godlike will, decree the Death of Pain."

Every year since 1911, on October 16 there is "Ether Day" celebration in the Massachusetts General Hospital, and some famous scientist is

chosen to deliver an address. Wm. H. Welch, the father of American Pathology; Simon Flexner, whose discovery of a cure for cerebrospinal meningitis marks almost as great an epoch as "ether"; Rosenau, one of the most brilliant of our younger men; and Crile, of Cleveland, an epoch maker in history, have been the orators.

The fine old institution has kept up its leadership all these years, and has carried the banner of progress into far pioneer fields—out-patient service, follow-up, and "end results" practice; occupation and reeducation for the handicapped, the designing and use of new methods and new equipment. So that we are proud to present this month a picture of that masterpiece of architecture, the Bullfinch Front, known wherever hospital architecture and efficiency are known.

The Dollar Yardstick in the Hospital.

In other pages of this number of THE MODERN HOSPITAL will be found a paper by Mr. Frank B. Gilbreth on "Scientific Management in the Hospital." This paper was prepared for reading before the American Hospital Association at the St. Paul meeting. It is published at this time because it contains many hints for hospital administrators and students of hospital problems that will prove extremely valuable, not the least of which is a hint that Mr. Gilbreth and other scientific management experts who are looking for business in the hospitals utterly fail to visualize the fundamental purpose for which hospitals are conducted. Mr. Gilbreth belongs to that class of whom one of the participants at St. Paul gave the following dialogue:

Expert to superintendent—"Well, how is our new system working?"

Superintendent—"Working fine."

Expert—"And do you find the hospital doing better?"

Superintendent—"Oh, we closed the hospital three months ago so we would have time to work the system."

As a matter of fact, Mr. Gilbreth, while writing around the hospital, is constantly thinking about a commercial workshop, where time and material and labor are measured solely by the yardstick of dollars and cents, and where a given output, when not profitable as against competitive wares, will be cheapened or closed up.

At the Atlantic City meeting of the American Medical Association Mr. Gilbreth read a paper before the joint session of the sections on Hospitals and Surgery, in which he described somewhat in detail a plan of "motion management" for surgeons doing surgical operations; he would have surgery standardized, so that every surgeon would do an operation in precisely the same way—with just so many strokes of the knife, so many motions of the wrist, and so many bends of the elbow, after having planned the operation in detail the night before.

Of course, Mr. Gilbreth is fundamentally wrong, and fails entirely to reach the mark in his conception of things in the hospital world, but there are several bits of advice in his paper that make it worth while.

More About Twilight Sleep.

In other columns of this number of THE MODERN HOSPITAL will be found a short paper by Dr. Joseph B. DeLee on the "Daemmerschlaf," or twilight sleep, of the Freiburg clinic. Many of the best men of the country have taken exception to the editorial in the last number of THE MODERN HOSPITAL, suggesting that maternity departments in general hospitals and the maternity hospitals should be prepared to carry out the technic of this obstetrical practice for the physicians in their hospitals.

THE MODERN HOSPITAL offers no excuse for its attitude. We believe that medical practice is wholly within the province of the medical profession, and it is not intended to open up technical questions in THE MODERN HOSPITAL; but we *do* feel that there is a difference of opinion on this subject, and that that hospital will be best, and will best serve the interests of the largest number of its medical staff, which is capable of handling any technical procedure in its several departments that may be called for by reputable men. To that end Dr. Knipe's paper had a definite value, and also to that end Dr. DeLee's paper has a value.

It may be added that Dr. DeLee's paper was written at the express and urgent request of THE MODERN HOSPITAL, because it was known that he had been in Freiburg, had had opportunity to see what was being done there, and that he had not been favorably impressed with what he saw; and it was deemed advisable that Dr. DeLee's opinion should be placed side by side with that of Dr. Knipe before the same audience that had read Dr. Knipe's paper and the editorial that accompanied it.

The next Legislature of Minnesota will be asked by the State Board of Control to appropriate $75,000 for a reception hospital at the state sanatorium for consumptives at Walker. The building would be used for the classification and observance of new cases and for general hospital purposes. According to the Minneapolis *Journal* this move will mark a change in the plan of the Walker sanatorium. The institution was founded with the view of treating incipient cases, but Dr. George W. Beach, the superintendent, says that few incipient cases are received. The cases are seldom discovered in their incipient stages, and when they are it is difficult to get patients to go to an institution.

MORE ABOUT TWILIGHT SLEEP.

Its Universal Adoption Would Be Followed by Appalling Mortality and Morbidity—Favorable Reports Not Justified.

BY JOSEPH B. DE LEE, M. D., CHICAGO.

In November of last year I spent several weeks in Freiburg, and had many opportunities to study the cases in the free wards at the University clinic. I went there a skeptic and came away more skeptical, but I gave the intern, Dr. Siegel, who kindly permitted me the freedom of the delivery room, every chance to prove the value of the method. It was possible for me to follow about ten or twelve cases through from start to finish, and I saw several more at intervals. It may have been, as Dr. Siegel explained, only chance that made five of the cases operative. There were during my short stay four forceps and one craniotomy. Two of the forceps cases were strong peasant women, in whom I had noticed the paralyzing effects of the injections. Both had had strong, regular pains, and, in my judgment, from appearances and the results of examinations recorded by the interns, both should have had spontaneous deliveries within ten hours. In both, however, the pains weakened decidedly and labor lasted until the next day. Rotation was found to be arrested, when finally the forceps had to be applied —one because of threatening danger to the child, the other because of protracted labor. Both deliveries were laborious and attended by extensive lacerations. The second patient had a severe post-partum hemorrhage, controlled with difficulty. One child had convulsions, and left the hospital still having them. In another case the labor lasted nearly thirty-six hours, again a powerful peasant, and pituitrin had to be given because of the danger to the child; then the pains became so strong that ether had to be administered, but, in spite of this (the patient was very unruly), a deep laceration down to the rectum and far up both sulci resulted. Since the skin was not torn, this laceration was not sutured. Several other cases required pituitrin to effect delivery.

The case of craniotomy was a patient who had had hard previous deliveries, and, if nature was to be trusted to force the head through a narrow pelvis, the scopolamin-morphin treatment was certainly out of place. The pains at once weakened under the influence of the drugs, and on the third day afterward fever arose, which forced the intern's hand. The time for a child-life saving operation being passed, delivery from below was attempted, but had to be effected by craniotomy. This is a death, in my opinion, chargeable directly to the method. One other forceps I saw in the amphitheater, a case, it was said, brought in from outside. The other was an uneventful operation done by a "prakticant."

The child often shows evidence of distress, such as rapid heart tones, but these are not regarded seriously unless they keep up, become irregular, or the symptoms appear near the end of the second stage. The apnea in which the children are born is not alarming to one who has observed the same in Cæsarean sections. A few of the children required restorative measures, but the state of the children, in the cases I saw, would not condemn the method. The danger before delivery requiring forceps and pituitrin impressed me as serious.

The matter of lacerations, also, was important. After delivery the placenta is expressed as gently as possible, so as not to awaken the woman, and there is a tendency to neglect a careful inspection of the birth canal for injuries for the same reason. In order to study the local conditions properly, it was necessary to give a general anesthetic, which the attendant was loth to do. In three cases labor was delayed somewhat, but terminated happily in a reasonable length of time. Indeed, I had to admit that when the method worked well it was ideal. The condition of the patient after delivery was not much different from those we observe in our own wards. Those who had operative deliveries or sutures were sore and tired; those (multipara) who had had easy labors, cheerful. Intensive use of suggestion is made in the recovery wards, and the reply to the stereotyped question could hardly be otherwise than favorable.

The proper conduct of the treatment requires a large force of physicians and nurses. The fetal heart tones must be noted constantly, and the patient may not be left alone, especially if delirious. In one of the cases the heart acted poorly for a while, but not enough to stop the treatment.

The method is one that may not be practiced in the home. Its general adoption throughout the country would result in an appalling infant mortality and an enormous maternal mortality and morbidity, and this is the reason I consented to write an opinion for the *Ladies Home Journal*. In a properly equipped maternity and in the hands of expert obstetricians, these drugs may be administered with a certain degree of safety, but the cases must be selected with exceedingly great care, and a man capable of his task must be within instant reach all the time. Even then the mother will often have to pay the penalty of extensive injury for her relief from pain.

Naturally, in my farther travel in Europe, I inquired about the employment of the "twilight sleep" in other clinics. Prof. T. W. Eden, of London, who was with me in Freiburg, had so little faith in it that I could not induce him to cross the courtyard to the confinement room to witness the cases there in labor. He spent several days studying mesothorium and x-rays in cancer, but would not accompany me to see the "twilight sleep." They had tried it, he said, and discarded it. At Heidelberg, Berlin, and Munich it was the same story. Gauss himself had gone to Dresden to demonstrate the method in Leopold's clinic, and could not convince that genial, yet astute, clinician that it was safe or practical. In Vienna, also, it was tried and found wanting.

This accorded with the experience, twelve years ago, of myself and other American accoucheurs. Perhaps with the new narcophin (we used morphin) and improved scopolamin we would get better results, but I doubt it. I am willing, however, to try it again, and in the new Chicago lying-in hospital now under construction, where I will be able to give the patients my own supervision, I may experiment on a series of carefully selected cases.

Among the reforms ordered by the new state board of insanity of New York are the following: No more secrecy or mystery about the care and treatment of the insane, the institutions to be put on the same public basis as a general hospital; immediate probing of all sudden deaths among patients; no staff appointments of physicians who have not had previous experience in caring for the mentally ill or who have not taken some special courses to fit them for the position; the standardization of the examination of patients; and the extension of outpatient work. Arrangements have been made with the psychopathic department of the Boston State Hospital to give special courses of from three to six months to physicians who desire to qualify themselves to meet the new requirements for staff positions. Such physicians will be treated as interns. They will receive no salary until the course has been completed, but their instruction and board will be free.

RAISING HOSPITAL FUNDS—ITS EDUCATIVE VALUE.[1]

Information Concerning the Broad Service of the Hospital in Preventive as Well as Curative Medicine Must be Disseminated—Philanthropists and the Wealthy Must be Taught the Pleasure of Giving—Every Agency Must be Employed for Publicity.

BY REV. A. E. CLEMENT, COMMISSIONER GALLOWAY MEMORIAL HOSPITAL, MEMPHIS, TENN.

The hospital, as an enterprise, occupies a unique position in its service to God and to humanity. The spiritual possibilities of man and the proper training of his mind have been emphasized for years, and properly so; but, after all, the mind and soul are so largely dependent on man's physical condition as to place the hospital work in the same class with educational and other religious movements. Moreover, the frightful cost of preventable diseases alone, approximating for the United States annually $1,500,000,000, easily places the hospital among the great financial assets of the nation. As Christians we have too long ignored our responsibility for the sickness and destitution of our brethren who struggle on against disease and poverty. The clock has struck the hour of an awakening conscience, and a new future, fraught with hope to suffering humanity, is before us.

One of the most optimistic signs of the times is the increase in the year's monetary benefactions. It is reported that on this side of the water the year's increase was $66,000,000 above that of 1912, reaching for the year 1913 the rough total of $350,000,000. While more than half of this sum was given for educational purposes, something like $100,000,000 was donated for scientific-sociological work, embracing hospitals, homes, and relief for the sick and helpless poor. Hospitals, then, in their various lines of service, are coming more and more to be regarded as safe channels for benevolence.

Over against these splendid benefactions for the protection of human life stands the alarming absence of that community knowledge necessary to build an impregnable bulwark of defense and stamp out the encroaching enemies to perfect health. In her book, "Social Work in Hospitals," Ida M. Cannon staggers us by this statement: "When we realize, as we may some day, that sickness is the usual attendant of ignorance, neglect, or immorality, either on the part of the individual or of the community, our point of view may change and we may cease to be so complacent about our diseases."

Here is, therefore, a double field needing cultivation on the part of our hospital forces. The general public should have brought to its attention the full import of the hospital in its curative and preventive work, and the philanthropist should have its possibilities of service wisely pressed on his already yielding conscience. Both are busy, and have to be brought face to face with the exact facts, and be made to really know the sufferings of their fellows. Our task is to bear the information, that both the general public and the philanthropist may be aroused to their full duty.

The general public does not understand what is meant by a "thoroughly equipped hospital." Too largely the hospital is thought of as a boarding-house for sick people; few conceive of it as also a plant for scientific research and service, whose benefits reach the rich and poor alike. The hospital stands for the study and solution of the problems of disease, and for scientific advantages to its patients under the care of specialists in medicine and nursing. It should be made plain that the privilege of the clinic promises a better trained medical service for the people, and that the preventive methods there employed benefit sections far removed from hospital walls. Last, but not least, it brings its strength to relieve the sufferings and consequent poverty of the poor who, in village and country sections especially, are miserably dragging themselves into a premature grave, not even knowing that a cure is possible. The public should have this information; it is all but criminal to withhold it longer.

In the matter of publicity, many believe that the most effective agent is to manage the hospital well—so well that its service will be forced on the attention of the public. This is one of the best means, to be sure, and without it all other efforts will be fruitless—a shameful advertisement of our failures. If we rest content with this alone, many will suffer and die in ignorance of a possible cure, and at the same time the philanthropist will pass on, oblivious of what he might have done and would willingly have done for suffering humanity had he but known. How much better to scatter the information and save both!

The press is powerful for the dissemination of information, and without it we should be all but helpless; we should use it freely. The daily paper, however, prints so much useless and sensational matter that much of its valuable information is buried beneath a deal of rubbish. Many of our leaders are turning to more condensed and special periodicals to convey to the world their choice information and best thought. But these do not reach the masses, and, if they did, their technicalities might confuse the ordinary reader and deaden his interest. Such articles should be popularized and given to the great daily papers. Much of the average man's mail today is laden with cheap circulars, bearing no special message, which find their way to the waste basket, as they deserve, but with these may go, unfortunately, many of the valuable circulars which we send out explanatory of our great cause and its plans.

Information so valuable as that which we bear must find, in addition to good service and the press, other means of dissemination. To my mind none is so fraught with power as the personal approach, strengthened by the added touch of an influential and sympathetic friend. On this point we might well learn a lesson from the ward politician, who never blunders into unwise appeals. He studies the men within his precinct, and uses only those whose influence will surely "land" the uncertain vote. By this same method let the hospital be brought to the direct attention of every representative man; then he has an opportunity to raise objections and have his queries met. This plan enables the solicitor to impart full information and apply it to the individual thinking of the citizen. Besides this, when the solicitor can secure a subscription, it always enlists the subscriber as a permanent friend of the institution and a missionary to promote the cause. Months after the solicitor has gone, the good effects of his efforts remain and a regular flow from the educative work comes into the hospital.

Furthermore, the personal appeal bears an added strength in its ability to win the hearts of the donors. Some have no further thought than to secure the money needed for the hospital service, forgetful of the fundamental truth that—

> "Not what we give, but what we share—
> For the gift without the giver is bare;
> Who gives himself with his alms feeds three—
> Himself, his hungering neighbor, and me."

In developing the character of Sir Launfal, Lowell properly places the giver first, before the recipient of the proffered crust and the Christ, for He Himself said, "It

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

is more blessed to give than to receive." What higher motive could prompt one to action than a desire to enlarge the heart of the giver, and that for greater achievements? When once the heart of the donor is reached, and the joy of giving is felt, a continuous yield will be the result. We are indeed laboring unwisely and in vain when we gather the last possible harvest from an impoverished soil.

In this approach the smaller offering, for its educative effect, enlisting all, both young and old, should be faithfully sought. The average contributors should have well-matured plans before them, for they usually guarantee success by creating confidence for larger gifts. It is generally understood, however, that bequests and large donations complete the plant and furnish the endowment for our hospitals. In securing funds, and in the collection of all subscriptions, which must never be allowed to grow old, it is well to remember that there should always be an atmosphere of generosity, freedom, and sincerity, and a full expression of appreciation of *all* donations. This latter point is essential if we would make and hold friends for our institutions.

It would be well for each hospital to build up a culture circle of a hundred or so carefully selected liberal givers, to whom information can be sent informally, with an occasional personal letter. These communications should not leave the impression that they are for immediate results. It is a plan to get the necessities of the hospital squarely before them and make of them friends for the institution, so that when an emergency arises they can be depended on to tide it over the shoals. Some such a corps must be cultivated and brought to stand behind an institution if it is to succeed.

In the work of solicitation for the cities, the best plan is the ten or fifteen days' whirlwind campaign, preceded by a complete organization of forces; but in the smaller towns and available country sections, where enthusiasm is difficult to be generated, it is better, though more expensive, to employ solicitors who are familiar with the methods of work, and who possess the knowledge necessary to move committees to action. The country needs the information incident to hospital service as well as the city, and the people should be made to feel themselves a part of such a mighty force.

But whatever fields we cultivate or the motive prompting us, whatever the educative work done or the methods employed, our cause is one that must ever be recognized as worthy—our knowledge of the facts must be commanding. It should be borne in mind that men who know their own business perfectly may not have caught our vision. They must be led to the heights, and be made to see and know the opportunity as theirs. Both the general public and the philanthropists should thus be kept in active touch with the work, and their willingness urged, but patiently awaited. Faith in God and in the inevitable outcome of our cause, and an abiding confidence in men, will bring the desired results.

Health Officer Landis, of Cincinnati, advocates the establishment of a school for handicapped children on the grounds of the new Cincinnati General Hospital. In a weekly bulletin of the health department Dr. Landis contends that these children can be given an industrial training fitted to their abilities as well as medical attention in open-air environment. Selected cases could be taken from their homes and kept at school under hospital supervision for a period of years, or until they become trained to some industry by which they may become self-supporting, says Dr. Landis. Others would be transported to and from their homes and school, where they might be given a common school education, industrial training, and medical attention in an open-air environment.

SCIENTIFIC MANAGEMENT IN THE HOSPITAL.[1]

Work Should Be Apportioned Out to Those Best Fitted to Do It—Time Is Lost by Giving Work to Untrained Hands—Hospital Work Capable of Accurate Measurement and Standardization—Workshop Rules Are Applicable.

BY FRANK B. GILBRETH.

It is impossible to give in a paper of this length much idea of a plan of management that takes as long to learn as it does to learn medicine or surgery.[2] Scientific management might be, perhaps, better defined as measured functional management. It rests on the principle of applying accurate measurement to present practice, deriving from the results of this measurement and the observations made while taking it the standard practice, and so dividing the work to be done that the standard practice may be carried out by those best fitted to do each part of the work. These being the underlying principles of the science of management, it is obvious that they are applicable to all fields of activity, and our investigations prove conclusively that the hospital can avail itself of this science with greater results than have been obtained in the industries, where the science was first discovered and applied.

It may be difficult for you, who are primarily interested in the hospital, to realize this fact, for the reason that most of the books as yet written on the subject of scientific management are written in the vocabulary of the shop. At first reading you may find difficulty in transferring the things there stated into the vocabulary of the hospital. However, having spent years of study in the theory and practice of management of the industries, and having also spent years in observing hospital practice and in studying hospital problems, we are able to tell you with authority not only that the same laws which govern efficient shop practice also govern efficient practice in the hospital, but also that many of the problems involved are not only similar, but identical, and that many of the solutions which we have found to those problems in the shop can be carried over bodily into the field of hospital management. The problems of transportation; problems of assembling; problems of enforcing and maintaining system, order, and discipline; problems of motion study, time study, and standardization; problems of teaching; problems of synthesizing these elements into methods of least waste—all may make two apparently dissimilar and unrelated lines of activity so closely akin that a successful solution in one case can be applied with little or no change with equal success to the other. You can recognize at a glance that all of these problems stated are to be found in hospital management, and that it may be possible for you to save much time and effort by becoming acquainted with efficient practice in the industrial world.

At first glance the hospital offers a particularly difficult field for scientific management, the reason being the difficulty in determining units of measurement. As a matter of fact, the problem of the hospital is less difficult than that of the industries, because of the fact that the field contains a larger percentage of highly educated men and women, who are, therefore, better able to appreciate the scientific method applied to their problem. Moreover, hospital workers have not been led to the false belief that "small individual outputs are best for all workers, be-

[1] Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

[2] "Psychology of Management," Sturgis and Walton, 31 West 27th street, New York City.

cause small outputs make more work for all." Again, hospitals do not have the fierce financial competition for existence that the average business has, that makes it frequently necessary that all changes shall immediately, as well as ultimately, be financially profitable. It is natural that scientific management should be developed first in the industries where the pressure of the need for survival is most forcibly felt. By the same reasoning it will go into the hospital last, for when they "run behind in the hospital and need more money, they just go out and get it." Again, in the average hospital the various departments are not so closely related but that one or more can be subjected to scientific management, and features can be installed without seriously affecting the others. This allows not only of ease of attacking the large problems at several points, but of standardizing the separate results, and of installing the successful methods with no loss of time in other departments.

There are several concessions which you must make at the outset before you can expect to do any valuable work in introducing the science of management into the hospitals.

The first is that you must submit to having accurate measurement applied to your present methods and practices. You must recognize that for ages there has existed a disinclination, not only on the part of surgeons and doctors, but on the part of all those connected with the hospital, to allow their work to be inspected and the methods and the results to be measured. This accurate measurement for the purpose of analysis of methods into their elements, and synthesis of the least wasteful elements into a standard, is the absolute prerequisite of any further work, and you must make up your minds to submit to it at the start, and not consider such accurate measurement an impertinence or as unprofessional.

The second concession that must be made is in the willingness to allow a man not trained either in surgery, medicine, or hospital management to apply the measurement and determine the resulting standards. This necessity is a question of the present only, or of such time as hospital managers shall have received training in the science of management. Ultimately, of course, it is expected that the work will all be done by men trained both in hospital practice and in the science of management. At present no men with such combined training are available, and you must be satisfied to be taught the method of procedure by men trained primarily in the industries. This you will doubtless be willing to do as soon as you realize the likenesses in all fields of activity, or have actually observed the improvements that can be achieved.

The third concession to be made is the recognition of the value of the standard that has been derived by such methods as motion study. We can show you pictures which illustrate plainly the fact that standardization such as is used under scientific management is today practically unknown in many parts of hospital management, and especially in the operating room. You would see in these pictures not only that the "set up" for similar cases differs to a surprising degree, that the tools used, called "instruments" when used by a doctor, differ widely for operations, which, so far as is known at the time of "set up" (preparation), are identical, that the costumes vary, but that even nonessential details, which are in nowise governed by the desires of the operating surgeon, are arranged not only differently in different hospitals, but also by different members of the same hospital corps and by the same members at different times. It is, however, not necessary for us to show you such pictures, because you yourselves could, perhaps, supply more examples of this lack of standardization than we could give you. In the hospital, as in all other centers of activity, there is some one best way for doing each thing that is done, but *the complete best way is seldom in the consecutive acts of any one person.* We must, therefore, attempt to find this best way, that large practice with comparatively few standards may be had; that the teaching, installing, and revising difficulties may be reduced to a minimum. Various articles in hospital literature and conversations with hospital authorities lead us to think that the "follow-up system" is believed to be scientific management. The "follow-up system" is but a very small portion of the problem. It bears about the same relation to scientific management as a "shingle does to a house." The "follow-up system" makes for better surgery and treatment. Scientific management's first aim is to install a self-perpetuating system for standardizing, and using the best of present knowledge and practice. Then, with such standards for a base line, inventing downward is discouraged and eliminated; the trend of progress is thus ever upward. At such a time the "follow-up system" will produce the greatest benefit.

The fourth concession to be made is that no one man is fitted to handle every kind of function of hospital management, and that the work will be better done if it is divided or "functionalized," and each division put in the hands of a man specially fitted and specially trained to do the work of his function. There has been a feeling prevalent that the surgeon is, because of his severe medical and surgical training, fitted to handle any and every part of hospital management. This feeling is gradually being broken down, as it is becoming more generally realized that the doctor's training, as such, in no way fits him for management or to manage, and that the management of the hospital should be handed over to a specialist, a trained manager, who can relieve the doctor of much work for which he is not fitted, and for which he has not been trained, and can thus allow him to devote his time entirely to such work as he can best perform, and get the best results and cause the greatest number of happiness minutes. While many of you today exemplify the new idea of hospital management in that you have received late special training to become the heads of institutions, yet many of you must acknowledge that the men working under you in the various departments are not specialists, in the general and not the medical sense of the term, and are not specially trained nor particularly fitted to do the work assigned them. When proper standards are determined, your work must be so divided and assigned that each man in the organization will do that work only which is the highest valued and most efficient work that he is able to do. This short outline will give you in a few words what is necessary to do at the outset in order to undertake to install the science of management in a hospital.

You will probably immediately ask, "What application, then, have functional foremanship, time study, motion study, standardization, theory of notification, and scientifically selected personnel, and method of pay to do with the hospital problem?" These are all methods or devices for measuring the units, making the standards, or insuring that the standards be maintained and continuously improved after they are once established. If you keep this idea clearly in mind, you may go through the existing literature and find that all the theory and the practice of installing the science has a direct application to your field, and that many things may be done by you immediately.[1]

A first step that we recommend is taking a survey of your present practice and of the members of your or-

[1] "Motion Study" and "Primer of Scientific Management," D. Van Nostrand, 25 Park Place, New York City.

ganization. In the industries we always state this first step as "reducing present practice to writing." You will be surprised what improvements will suggest themselves to you as a result of seeing in cold ink exactly what you are now doing in each department. While you cannot hope to reduce your management to a science without years of application to the problem, and without direction from a management specialist, you can at least make a beginning.

Begin, then, to reduce your present practice to writing without any idealization, and to determine in your own minds exactly what the work is that you are doing in your hospital, what lines of activity are included, and what kinds of work each member of the organization is doing. Then attempt to determine how many different kinds of methods you are at present employing for doing the same thing, and exactly which methods you consider best, and, therefore, worthy to be carefully measured and used as a starting point for a permanent standard. You will probably be surprised to find that you have not one place where you have a standard that you would care to have go before the world as the standard that you recommend. Begin, next, to observe these various kinds of work, to see the units by which each kind of work could be measured, the different methods that are being used in doing the work, and the different devices which are at hand or in use. We can tell you at the outset that you will be astounded to see how many methods you are using, and how many different kinds of devices are on hand for doing exactly the same kind of work. Remember always that the larger the number of different kinds of devices, the less practice and the less skill you will have with each. You will also be astounded to find on what principle your work is divided, or, in many cases, that your work is not divided according to any principle at all, but that miscellaneous duties are heaped on many members of the organization according to whether they have any more spare time. It is your task to decide which methods and which devices shall be first submitted to accurate measurement as possible starting points for the determination of the standards that will be at the same time the most potent object lessons as to what can be done under scientific management.

The second piece of work which you can do at the outset, and which may be done simultaneously with the first, is a study of the members of the present organization as related to one another in your organization chart, which is a graphic portrayal of what exists, to the end that you can visualize exactly what is the present state of the division of labor of your working force. At the head of this chart you will put your hospital superintendent, and under him you will put each member of the organization, connecting each individual with the others according as his duties relate him to them and the paths of authority. With data of your present practice and your organization chart, you will have your problem clearly before you. If you do not put a management expert in to make this survey, you will get the next best results by having each member of the organization, so far as he is willing to cooperate to this extent, write down his own practice of his duties, and, where this is not feasible, appointing some member of the organization, whom you know to be observant, to make a close study of the practice of the individual and to record it for him. In any case, it will be a valuable check to have the work even of those who are making records for themselves observed and described by an unprejudiced observer.

In selecting such methods and units as you desire to submit to accurate measurement, observe and compare the motions used in the various methods and the amount of fatigue caused. It may be of interest also to know the "over all" time, though this must in nowise be confused with "time study," and can only serve, in the final analysis, as a base line from which to start your learning curves and your progress. You might be interested to know that probably no present methods and even no present cycle of motions is the one that you will ultimately decide to use. The ultimate method will be a synthesis of the best elements of all methods submitted, but you will take most satisfaction out of this ultimate method when you can compare it with a carefully made record of the old method, and note the exact changes and improvements.

With regard to the ultimate organization charts, it is possible for us to give to you our functional chart, which illustrates the functions and paths of authority under scientific management, so that you may visualize for yourselves exactly what you are trying to do, and the sequence of steps in making the changes.[1] The aim of this chart is to show not only how the work should be divided, but how the individuality of the workers should be conserved and utilized. There is probably no doubt in your mind as to the desirability of functionalizing the work, and determining not only the kind of work, but the pace at which work is to be done. Under present conditions in the hospital there is usually little or no data as to the pace or the fashion of work. The window washer usually takes on the fashion of work of the surgeon, and the laborer, who proceeds to get ready to undertake the beginning of his "operation" of sweeping a corridor, looks at the brooms and pail of sawdust with quite the same expression and mannerisms that the doctor uses when he looks on the etherized patient, and is apt to perform his work with the same disregard of methods of least waste as the surgeon may use in performing a critical operation. The point here is *not* that the surgeon should speed up his work. On the contrary, he should be so relieved of everything but his proper work that he may be able to slow down critical work to as great an extent as is desirable. The point is that a large amount of work done in the hospital is in no way a surgical or medical problem or of a critical nature, and there is no excuse for the prevalence of but one fashion of doing work for the whole establishment. Here is a typical example of where the methods, devices, standards, tasks, and methods of inspection already derived by motion study and time study in the industries can be taken over bodily.

Most workers in the hospital acquire, together with doctors and nurses, the feeling against specialization in the functions, and the belief that the giving up of general duties tends to impair permanent usefulness. They are apt to believe that those who are willing to do things entirely outside of their own special duties shall be recognized as having special merit only in their performance, while in reality the specialist in the function is the man of greatest usefulness and earning power today. Those who are doing their work with greatest efficiency for the organization as a whole can afford almost no time for work outside that specialty at which they are particularly efficient. This fact you must accept, and must recognize also the necessity for specializing such functions as inspection and discipline. We emphasize this particularly because in the hospitals these are the two fields in which specialization is most opposed. Without proper inspection no accurate records of performance can be obtained. Without specialized discipline no true cooperation can be obtained, and cooperation, after all, is the maintaining force.

[1] "Applied Science," Toronto University, March, 1912.

The following are the principles of functionalization to which you must ultimately conform:

1. The planning must be separated from the performing.

2. The superintendent must have such a training that he is capable of investigating conditions all through the hospital on the *exception principle*—that is to say, he must, when a case of peculiar success or failure is brought to him, be able to deduce the cause and to see that only desirable results are repeated.

3. The planning work must be divided into four parts, one of which shall include prescribing *who* shall do the work, *where* it shall be done, and *when* it shall be done; the second of which shall prescribe *how* it is done; the third of which shall keep account of *how much* time it took to do it, and how much it cost; and the fourth of which shall take care of the function of discipline and employment, and induce and maintain cooperation by explaining the "*why*."

4. The performing department must also be divided into four parts, the first and second of which shall consider different grades of teaching and the transference of skill and maintaining standard conditions; the third of which shall consist of preventing breakdowns and repairing; and the fourth of which shall consist of inspection.

5. A study of individuals to determine who had better work under each function, and to what extent, will do much to hasten the speed of installation.

All of this work you can begin immediately. It would be futile at the present time to outline to you in detail the further progress of installing scientific management in hospital work, for several reasons. The first is that the progress, as so far outlined, is absolutely a preliminary to everything which follows. The second is that, until you have done some preliminary work, it will scarcely be possible for you to understand the details of the installation period.

It remains but for you to ask what will be the ultimate savings through the introduction of scientific management. They will be such savings as always result when for judgment, personal opinion, and guess work is substituted the use of accurate measurement. The doctor now uses such measuring devices as a watch, thermometer, etc., but there are many more measuring devices that are just as necessary for purposes of obtaining efficiency. Scientific management will cause elimination not only of waste of materials, but of waste of human effort, which is, in the final analysis, the most pitiful waste of all.

When your management becomes a science, there will result greater efficiency in you as individuals, and in the great work of the hospitals to which you all devote your lives.

All great revolutions follow the same steps of progress —namely: (1) attention, (2) interest, (3) action.

We have been very fortunate in obtaining the *attention* and *interest* of such well-known leaders as your president, Dr. Howell, and some of the other leading surgeons of this and other countries; but we have not as yet been able to obtain any action to amount to anything, because of the fact that the *entire structure on which hospital management is built is wrong.* As the incentive, so will the result be, sooner or later. The incentive necessary to adopt the best from the industries does not exist at present.

Miss L. Stampher, matron at the Cottage Hospital, Hood River, Oregon, was visiting relatives in Austria when the war commenced, and owing to the difficulties of travel found it impossible to get out of the country.

MUNICIPAL HOSPITAL FOR PAY PATIENTS.

Mayor of Cincinnati Proposes Institution Where Doctors and Nurses Will Take Lower Fees—Editorial Comment by Medical Journal.

The Mayor of Cincinnati brings forward a new idea in suggesting the building of a municipal hospital for people of moderate means—that great middle class, by long odds the most enormous in the community, and yet, curiously enough, hitherto the most neglected, medically and surgically. Heretofore the only suggestion for the relief of these people has been that physicians and nurses reduce their fees for attendance on them. This the physicians have done for decades past, perhaps for centuries, but it is more difficult to settle this nursing question. This new profession seems loth to make concessions even to the class that most of its members spring from—and, to tell the truth, it seems difficult to explain why they should do so.

This arrangement would be but a distribution of charity—the money for the distribution being taken from the pockets of but two members of the community, the doctor and the nurse. The class that needs relief, however, is one of the most deserving in the body politic. It includes the vast mass of the working population and part of the professional classes. These people will not accept the outright charity of the free municipal hospital—their pride will not permit it. But they have not the wherewithal to employ both doctor and graduate nurse in their own homes, and cannot afford the charges of our present private hospitals plus their own physician's fees. These private hospitals all announce that they will take charity cases, or cases at such a reduced charge as to amount to the same thing, and, therefore, they have to make up what they lose on this class of cases by practically overcharging the private cases on full pay. If, therefore, we could have a private hospital that could furnish first-class shelter, food, and attendance at cost price, where the private physician could take his cases and have them under the care of graduate nurses from first-class training schools, a problem of the greatest importance would be solved, and solved to the satisfaction of the community, the nurses, and the physicians. And a cause of a vast deal of not unreasonable present discontent would be removed.

A municipality could perform no greater service for the community than this. Such a hospital, not ministering to charity cases, would have no staff—and there might be no particular reason why it should conduct a training school for nurses.—Lancet-Clinic, Cincinnati.

New Laboratory at New York Quarantine Station.

The new laboratory building of the New York Quarantine Station recently opened at Rosebank, S. I., is one of the finest of its kind in the world, both in construction and equipment. A concrete wall 6 feet wide at its base and 15 feet high extends 500 feet along the southern boundary of the quarantine reservation to protect the building. When completely installed, the cost of the laboratory, with surrounding improvements, will exceed $90,000. Dr. Oscar Teague, formerly of Cornell, has been appointed chief of the laboratory staff.

Every nation is today rightly strengthening the protective efficiency of its quarantine department, and this splendid equipment in connection with the work of our greatest port not only fits us to meet inevitable consequences of the deplorable European war now raging, but affords splendid opportunity for research work.

CURRENT HOSPITAL LITERATURE

Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Is Window Aeration Sufficient for the Renewal of the Air in Hospitals? (Gemügt zur Lufterneuerung von Krankenhäusern die Fensterlüftung). H. C. Nussbaum. Haustech. Rundschau, Berlin, 1914, No. 23.

The renewal of the air in sickrooms is a necessity. But ventilation through the open window is only possible in mild weather, as many patients are very sensitive to draft. As the renewal of the air in sickrooms is necessary day and night, even the smallest hospitals cannot do without some form of artificial ventilation. It is true, all ventilation systems have so far been very expensive, but the question of costs should here be disregarded. The creation of an efficient and practical system of ventilation is one of the most important technical questions in modern hospital construction.

A New Large Italian Hospital at Jerusalem (Un nuovo grande ospedale italiano a Gerusalemme). Rivista ospedaliera, Roma, 1914, V, No. 6.

This new hospital was founded by the Italian Missionary Aid Society, with the assistance of the Italian Government. The foundation was laid in 1911, but the construction was interrupted by the Turkish-Italian war. In the beginning of 1913 the work was again taken up. The building will soon be completed and will be opened in April, 1915. The hospital contains four stories, and has a frontal extension of 100 meters. It is built in the Siennese style of the thirteenth century, and is said to possess the finest building front in Jerusalem. The main front faces west. The central portion of the structure is occupied by a fine and large chapel. The wings are taken up by the various hospital divisions.

Psychoanalysis and Hospitals. L. E. Emerson. Psychoanalytic Rev., New York, 1914, No. 3.

The writer believes that psychoanalysis, primarily a method of therapy, has its own proper function to fulfill in hospitals; that, so far as the hospital itself is concerned, the adding of another department increases the burden to an organization already pledged to herculean labors. It is, however, of the greatest advantage to individual patients, and, relieved of medical responsibility, it becomes a greater opportunity to the psychologist. Perhaps the greatest value of psychoanalysis to the hospital lies in its opportunity to demonstrate the protean and deceptive forms of the symptoms of hysteria, simulating so successfully the symptoms of organic diseases that, unless one were consciously on the watch, he could be easily misled. Symptoms that have been treated medically and surgically, which later can be demonstrated to be hysterical, not vaguely, but with adequate cause, with theoretically valid etiology, are of the greatest use in future differential diagnoses.

Observations on the German Firing Line. An abstract translation from letter of Prof. Paul Kraske, University of Freiberg. Lancet-Clinic, Cincinnati, October 3, 1914.

If I review my experiences and observations since I first appeared on the scene of activity, I find that my expectations, which were not high in regard to the efficiency with which we were able to care for the wounded, have been markedly excelled. The conditions were favorable in that a large proportion of the injured could be cared for in a modern hospital under the direction of a skilled surgeon, who, with much energy and patience, conducted the many operations. Then, again, we found great difficulty in moving the wounded during the darkness of the night throughout which the battle continued. I am compelled to emphasize that our surgeons, assistants, nurses—and, in fact, the whole machine—withstood the first test in a brilliant manner. I could not make a single suggestion how this department could have been in the least improved. It was a great pleasure for me to note with what calmness and deliberation the wounded were efficiently cared for. There was an entire lack of hasty energy, which has so often been noted in similar situations. The fundamental principle of early occlusion of the wound has always been intelligently carried out, with, of course, great benefit to the wounded.

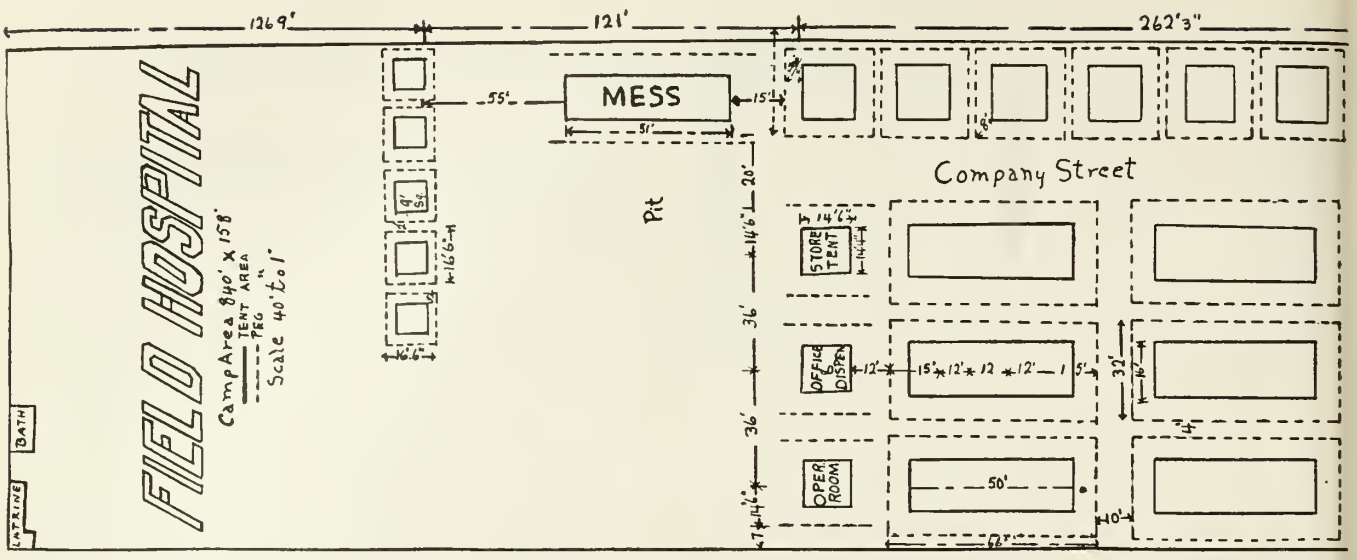
American Hospital at Neuilly. Abstract from London letter of H. M. Cohen. Lancet-Clinic, Cincinnati, October 3, 1914.

Not the least of the hospitals caring for the wounded is the American hospital at Neuilly. It is a magnificent example of what can be done in a few weeks by enthusiasm backed by ample funds. When war broke out, the American colony in Paris took over the Lycee Pasteur and set to work to transform a half-finished building—the school was not due to be ready for six months—into something resembling a modern hospital. They have succeeded admirably. Out of unfinished, rubble-choked rooms they have improvised clean, airy wards. They have an operation room fitted with all the new appliances, an x-ray room, a bandaging room, admirably equipped kitchens, and a devoted staff of nurses and orderlies. Men and women bearing, some of them, the most powerful names in our American plutocracy, are working there at the most menial tasks with admirable self-abnegation. It is the duty of an American multimillionaire to see to it that wounded Turcos, some of whom have been without a change of clothes for a fortnight, are thoroughly and conscientiously scrubbed. Dollar princesses are busy rolling bandages and preparing dressings. All Neuilly seems to be outside the iron railings, watching the comings and goings of the ambulance cars that roll up, and the citizens are loud in their praise of the care their compatriots are receiving at the hands of the brother republicans.

Handling Field Hospital Equipment. R. H. Goldthwaite, Captain Medical Corps, United States army. Mil. Surgeon, Chicago, 1914, XXXV, No. 4.

The author explains that methods for pitching the various elements of the field hospital are more or less an open question, and gives results of practical work with new material. It required two squads of four men each to pitch this tent. Ward tents with these new elements accommodate 36 patients.

The essential feature of these methods of accurate pitching is that the peg area, with its chief points so definitely marked by accurate measurements, leaves the tent



Handling Field Hospital Equipment—The field hospital.

area to take care of itself largely, for it must be obvious that, if the peg areas are exact and the guy pins accurately placed, the tent must of necessity be exactly placed and the alignment correct. In working from a greater area to a smaller one, mistakes are minimized and largely eliminated, whereas in working from a small area to a larger one there are largely increased chances of placing pegs incorrectly and errors in measuring the smaller area will be magnified.

The appended diagram gives all the data necessary for accurate pitching of a field hospital, including every essential measurement. It is adapted and amplified from the diagram in the field service regulations for 1914.

On account of the numerous changes in property equipment of field hospitals, and the increase in personnel, the loading scheme for a field hospital as given in the manual for the medical department is no longer applicable.

The following loading scheme, based on the new equipment, has been tried out on wagons as far as possible and found satisfactory. Of the eight wagons required, the loading was as follows: No. 1, kitchen supplies; No. 2, dispensary and operating tent equipment and supplies; No. 3, tentage for hospital wards; No. 4, equipment for hospital wards; No. 5, forage, officers' baggage and tentage; Nos. 6, 7, and 8, supplies.

The Sanitary Aid in Foundling Hospitals (L'assistenza sanitaria nei brefotrofi). M. Reano. Rivista di igiene e di san. pubblica, Parma, 1914, XXV, No. 9.

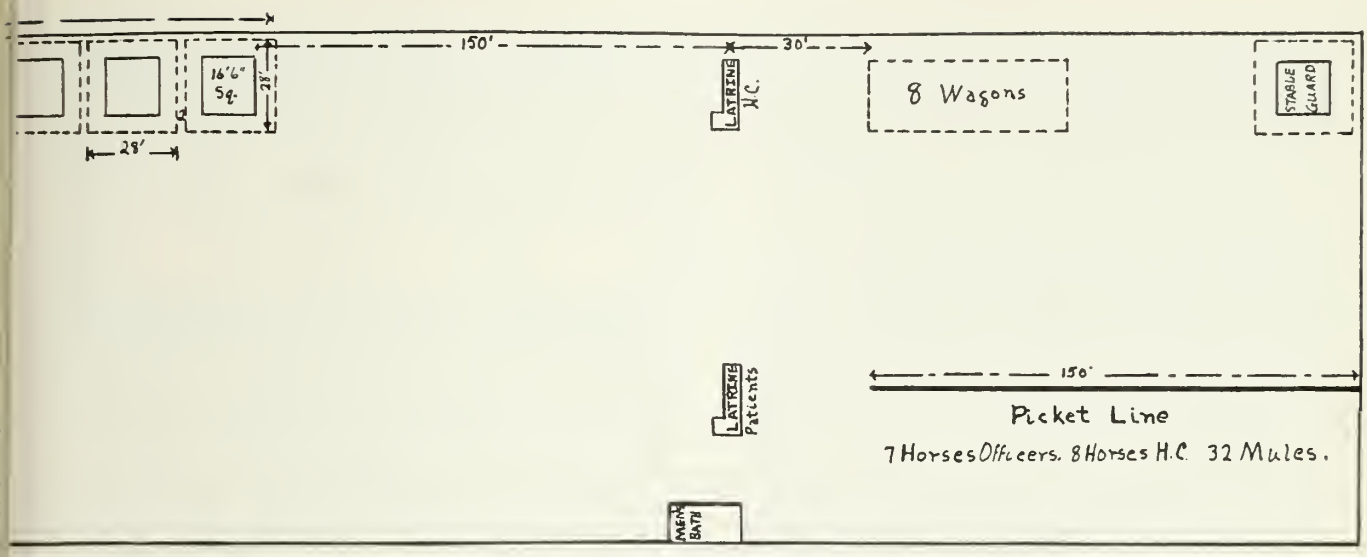
Infantile mortality in Italy is still very high. The mortality of illegitimate children is, for many reasons, greater than that of children born in wedlock. The protection and care of children, be they legitimate or illegitimate, is a sacred duty and a patriotic, social, and humanitarian work. There are two systems of care for illegitimate children. The Anglo-Saxon, in force in England, Germany, Austria, Switzerland, Denmark, Sweden, and Norway, is founded on the principle that the maintenance of legitimate and illegitimate children is the duty of those who have brought them into life. The other, or Latin system, is in force in Italy, France, Hungary, Spain, Portugal, and Russia, and is based on the collectivist principle. Foundlings and illegitimate children are cared for at public expense, and it is not permitted to search for the father. In Italy the burden of caring for illegitimate children rests on each province, which maintains a foundling hospital. The mortality in these foundling houses has always been very high, but of late years it has gradually been decreasing. From 1900 to 1910 the mortality of infants under one year in the foundling hospital at Milan has been reduced from 45.6 percent to 30.3 percent. In Turin it has decreased during the same space of time from 50.8 to 32 percent. The foundling hospital of Turin does not only take care of foundlings and illegitimate children, but gives also assistance to poor married mothers who are not able to bestow proper care on their children.

Antityphoid Vaccination of the Personnel in the Paris Hospitals (Vaccination antityphique du personnel des hopitaux de Paris). Mesureur. Gazette Méd. de Paris, 1914, LXXXV, No. 252.

Antityphoid vaccination has been practiced for several years with great success among the French troops in Africa. By a law of March 28, 1914, it has been rendered obligatory in the whole French army. In a number of Paris hospitals, notably at Val-de-Grace, preventive inoculation against typhoid fever was introduced several years ago, but it was not compulsory. Through the initiative of the author, who is director general of the public institutions of Paris, antityphoid vaccination has now been made obligatory for all persons who are employed in the hospitals of Paris. The measure was not carried through without great opposition from various sides. It was said that this vaccination was useless, that it was dangerous, and that several persons had died from infection as a result of this vaccination. The author combats these adversaries, and shows that the few deaths reported must be attributed to other causes and not to the antityphoid vaccination.

Insane Asylum or Hospital? (Irrenanstalt oder Heilanstalt?). Ztschr. f. Krankenanstalten, Leipzig, 1914, X, No. 25.

The modern institutions for the insane have little in common with the prisonlike establishments of earlier times. They are situated in beautiful localities, the buildings are clean, neat, and attractive, and surrounded by pleasant parks and gardens. All these changes are due to the great progress of medical science and of modern architecture, and to the modern spirit of humanity, which tries to remove all those influences which have an unfavorable effect on the patient and to make his surroundings as pleasant and attractive as possible. The treatment of the patients, too, has greatly changed. The old compulsory procedures have given way to kindness and rational thera-



Handling Field Hospital Equipment—The field hospital.

peutic methods. All the means of science and experience are called on to promote the curative process of curable patients, and to render the condition of incurable patients more pleasant and bearable. Only in one point we frequently hurt the feelings of the patients—in the name we give these institutions. The name "insane asylum" (Irrenanstalt) has fortunately been discarded by most institutions, especially in middle and southern Germany, and the name "hospital" (Heilanstalt) is generally used. The nurses and all employees of the hospital should be strictly enjoined not to use names and expressions which might remind the patients of the place at which they are. As it is the mind of the patient that is affected, it is of highest importance that everything should be avoided that might have an unfavorable influence on the cure.

Modern Ventilation Arrangements in Hospitals and Charitable Institutions (Moderne Lüftungseinrichtungen in Kranken- und Humanitätsanstalten). M. Setz. Wiener klin. Wchnschr., 1914, XXVII, No. 24.

The simplest method of ventilation consists in opening windows and doors, but in winter too much heat escapes uselessly, and many patients cannot bear the draft caused by such a ventilation. Engineers have tried in various ways to make use of the difference of heat—i. e., of the density between the inside and outside air as a moving principle for a natural ventilation. The well-known fact that the air, like all gas mixtures, lies in horizontal layers, whose density decreases from the floor upward, was the basic idea to accomplish aeration of a space in a vertical sense by a disturbance of the equilibrium between the various layers. But none of the various systems proved to be practical, as it was impossible to avoid the disagreeable effects of drafts. Lately the Belgian engineer, Prof. A. Knapen, invented a system of ventilation in a horizontal sense. In his natural system of ventilation, which he calls "aération différentielle," and which was patented in all countries, he proceeds from the fact that between two opposite sides of a building there exists, on account of the effects of sunlight, a difference of heat ½°-1° C., and therefore also a corresponding difference of density in the outside air, so that in fact a horizontal aeration from the cooler to the warmer side is made possible. Three tiers of openings are made in the walls, which slant outward and downward, and are connected by openings among themselves. To prevent drafts, the sizes of these openings must stand in a definite relation to each other, and no two openings of the same size must be opposite each other. On the outside these openings are covered by wire netting and on the inside they are provided with stopping slides. In the partition walls there are horizontal openings, and the doors, above and below, are provided with openings, so-called "glissières," which can be closed by metal slides. The slanting openings near the ceiling are, of course, the largest, and serve especially for the admission of fresh air, which in its downward course is gradually consumed and heated. The consumed air, heavy gases, carbon dioxid, etc., escape through the lower openings, while the openings in the middle serve as regulators. The greater pressure on the openings of the colder side, and not the difference of temperature between the inside and outside air, is the moving principle to produce complete aeration. The slightest increase of pressure on one side of the building sets at once the whole system in motion, and, as there is always a difference of pressure, this system operates both day and night. The article is accompanied by several diagrams.

The New Operation Building of the Eppendorf Hospital (Das neugestaltete Operationsgebäude des Eppendorfer Krankenhauses). H. Kümmell. Beiträge z. klin. Chirurgie, Tübingen, 1914, XCII, No. 1.

The Eppendorf Hospital near Hamburg is by far the largest institution of its kind in Germany. The surgical building occupies a central position in this great hospital city. It contains four operation rooms, and the largest of these is located at one end of the building, facing the central corridor. It has a large amphitheater, with stone seats and room for 100 persons. The amphitheater has its own entrance from outside, and is connected with a room where the students are required to put on a long white gown, which is washed every day. This operation room gets its light from the entire north side and from above. At night artificial light is furnished by six powerful incandescent lamps of 1,000 to 3,000-candle power each. Sidentopf's mirror illumination is another efficient source of light. An epidiascope of latest construction is used to project images of interesting subjects on the wall opposite the spectators while the room is darkened. A daylight projection apparatus is also available, which produces clear and distinct images without requiring a dark room. The other operation rooms are located along the central corridor, and are of somewhat smaller dimensions. In the same building is also a well-equipped roentgen in-

stitute exclusively for the use of the surgical division. Over 5,000 roentgen pictures are here taken annually. The building contains also laboratories for scientific photography, chemical researches, and bacteriological studies. A large room is provided for experimental surgery, where animal experiments are carried out on an extensive scale.

Private Duty Nursing. Jeannette McClellan, R. N., American Journal of Nursing, September, 1914.

The author read her paper to the senior class of pupil nurses at the Methodist Episcopal Hospital, Brooklyn. She took her hearers into the private homes in which she had served, telling them many anecdotes of happenings there—of the difficulties of nursing in some homes and the pleasures in others. A saving grace of humor must have been vouchsafed to Miss McClellan, because, as she told some of her experiences, there was always a funny side to even the most calamitous incidents. The value of the author's paper lay in her insistence that a nurse on private duty must accommodate herself to conditions as she finds them; that she must always accept the inevitable and make the best of it; that she must always be a help and never a hindrance to a stricken family; that she must sometimes do things wholly foreign to a nurse's normal duties, in order to get the best for her patient; make friends in the family, including the servants, and that sometimes she must exert her greatest ingenuity—to even make the limited laundry hold out. Nurses should read Miss McClellan's paper; it will give them a fine picture of what they are going into, and remembrance of her admonitions will often save them from embarrassment and mistakes.

Does Ice Convey Infectious Diseases? Hugh S. Cumming, of the United States Public Health Service.

Very soon after the discovery of the cholera vibrio by Koch and the typhoid bacillus by Eberth it was learned that these diseases were spread largely by water infected by the causative organism, and scientists studied the viability of the organism under varying conditions and environments. It was promptly shown that, while moderate heat for a few minutes (60° C. for twenty minutes) would kill all such germs, some will resist cold for a long time.

1. Clear ice is, of itself, as free from the danger of conveying infectious disease as we need wish.

2. Dirty or cloudy ice may be dangerous. It should not be placed in water nor on food which is to be eaten uncooked.

3. There may be danger in eating iced foods or using iced drinks if the ice is improperly handled when placed in contact with the drink or food.

4. We may eliminate all danger by avoiding the handling of ice with dirty hands, by washing the ice with pure water, and by using only clear ice.

5. The average laboring person does not always have the opportunity, even if he have the inclination, to cleanse his hands after attending to those necessities of nature which require their use for purposes which almost inevitably result in their contact with excreta, which may contain the organisms of disease, even in apparently healthy people. It is therefore impossible to overestimate the danger resulting from the handling of ice by unknown persons if the ice is placed in direct contact with drinking water. Consequently, where intelligent personal supervision is impracticable, those furnishing the water should be instructed to adopt such means of cooling water as do not require direct contact of ice and water.

Uniform for Nurse Corps.

By order of the secretary of war the uniform of the Nurse Corps, United States army, for service at army posts and general hospitals will consist of a waist, a belt, and skirt of suitable white material, a bishop collar, and white cap. The uniform for field service is to consist of a one-piece dress made of blue-gray cotton crepe, a plain white apron, a turnover collar, and a white cap.

British Red Cross.

The London correspondent of the Philadelphia *Press* claims the British Red Cross Society can call on 60,000 persons, many of them highly trained, to undertake field ambulance and hospital work. If there is a serious demand for their services, it is estimated that at least 95 percent of this number will obey the call. The society is the body officially recognized by the War Department, and acts under the direction of the admiralty and war office, in conjunction with the hospital staff. Its present organization and status are due to the lessons of the South African War, when various independent nursing societies, some of them poorly managed and all interfering with each other's movements, caused the authorities no end of trouble. The result was that all societies were amalgamated and put under one head. The forms of aid of the society include the provision and equipment of hospital ships and trains, hospitals and convalescent homes, clothing, medical supplies, food, and comforts for the soldier, such as pipes, tobacco, chocolate, playing cards, and stationery.

Isolation Hospitals.

The Cambridge University Press proposes to publish a series of manuals of public health. One of the volumes of much interest is by Franklin Parsons on isolation hospitals. With the advance of a sanitary conscience among a people, such hospitals must become more and more necessary, and of greater use. In earlier days and among backward and primitive peoples much opposition is felt, and many of us remember the plague riots and the burning of plague camps and hospitals by the very people for whose good they were intended. The first isolation hospitals were the lazar houses for the isolation, or rather segregation, of lepers. In the thirteenth century, it is said, almost every town in France had its "lazar house;" the plague led to "pest houses," and at Sevenoaks an old house with this name existed down till 1902. "Fever hospitals," according to Dr. Murchison (who became a fever expert after his retirement from the Indian service), were established as a result of the great typhus epidemic of the eighteenth century. The London fever hospital was opened in 1802, and a previous smallpox hospital in 1745.

The Public Health Act of 1848 had no clause authorizing the establishment of isolation hospitals. The Metropolitan Poor Law Act of 1867 led to the establishment of what is still quaintly called the Metropolitan Asylums Board, which is now the ultimate public health authority of London. Other important acts were the Diseases Prevention Act of 1855, and the Sanitary Act of 1866 due to the cholera outbreak of 1866.

The uses of an isolation hospital are threefold—(1) to cure or relieve the sufferer, (2) separate their infectious sick from the rest of the community to prevent the spread of the disease, (3) and to obviate the difficulties, inconveniences, and pecuniary losses which the presence of infectious disease might entail.

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HOME-MADE HOSPITAL APPLIANCES

Hospital Furniture in Use at the Massachusetts General Hospital.

BY FREDERIC A. WASHBURN, ADMINISTRATOR.

Since publishing the pamphlet entitled, "Home-Made Hospital Furniture," by Dr. Herbert B. Howard, then administrator of the Massachusetts General Hospital, and by the present writer, certain other apparatus and devices have been introduced. Some of these originated at this hospital and others are frankly copied. Such of these pieces of apparatus as are made of copper were constructed outside under our direction; the others, made of iron or wood, were all built by our own mechanics.

STERILIZING HOPPER.

In constructing the sterilizing hopper, it is important that the double jacket should be carried down to the valve seat in order that the column of water may boil throughout its depth. This hospital has used this sterilizing hopper for a number of years successfully and with no complaint. At other places where they have been installed, objection has been made to odor and noise and to the boiling over of the contents. These faults are due to improper installation and use. The vapor vent pipe should be large and straight. It is possible to introduce into this vent pipe a small jet of live steam to add to the suction when necessary. This will effectually carry off all vapor, so that there will be no odor in the room. To prevent boiling over, it is necessary to have a line on the outside of the hopper, above which level it should never be filled. There will be no noise if the steam is introduced gradually to the double-jacketed part of the hopper.

BED-PAN STERILIZER.

The bed-pan and urinal sterilizer is a simple affair, consisting of a copper receptacle with a steam coil in the bottom. Into this water is introduced. The bed pans or urinals are placed in the wire basket suspended in the boiling water.

STEAM TABLE.

The steam table for the diet kitchen has a copper top, in which are holes of various sizes to hold earthenware receptacles for the food. These set in water which boils by means of a steam coil. Beneath is a hot oven heated by steam coil for dishes. This is a common contrivance, used in many places, and scarcely needs to be mentioned.

DISH STERILIZER.

The utensil sterilizer and the dish sterilizer are built on the same plan as the bed-pan sterilizer. In the utensil sterilizer are boiled the enamel bowls, basins, and other such utensils used in the ward. The dish sterilizer is used in the ward kitchen for boiling dishes after they have been washed. In some instances today we are installing dishwashing machines in the ward kitchens. This cannot always be done because of the noise and steam arising from them.

OPERATING INCLOSURE.

The operating table inclosure is a useful device for

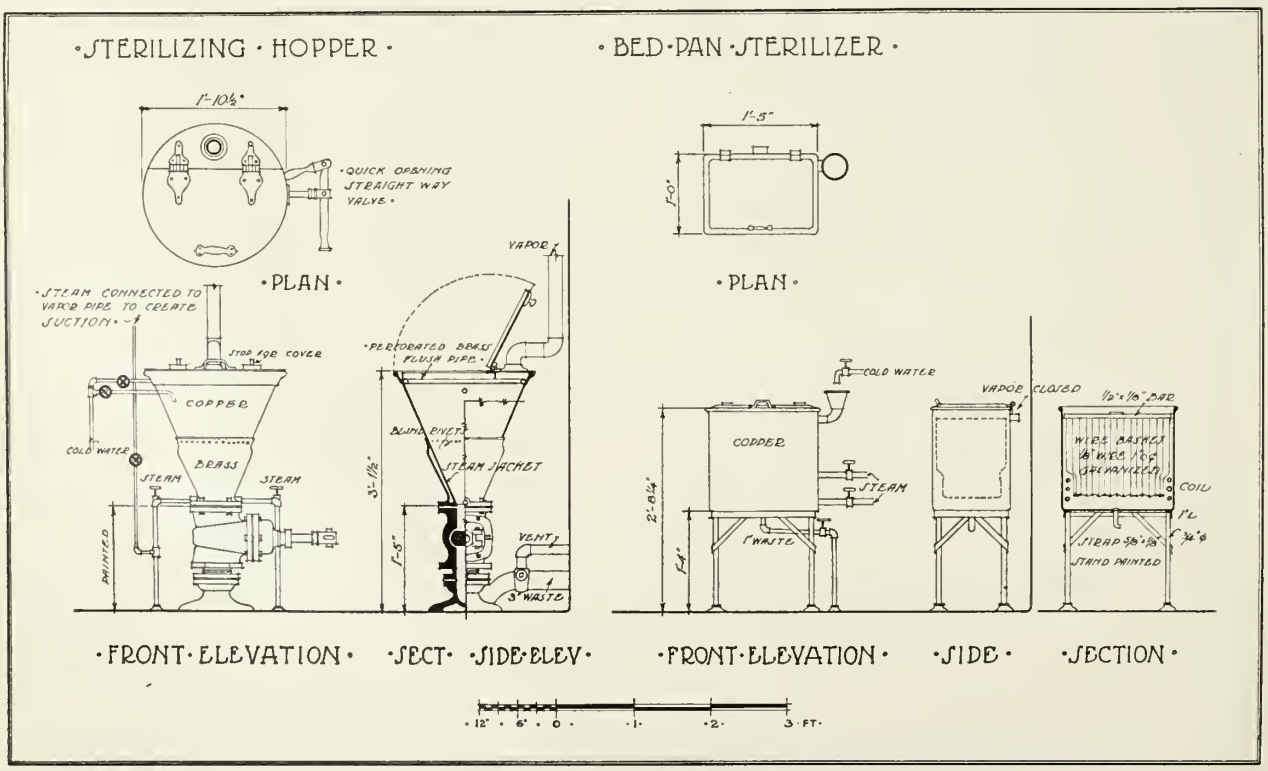


Fig. 1. Hospital furniture in use at the Massachusetts General Hospital.

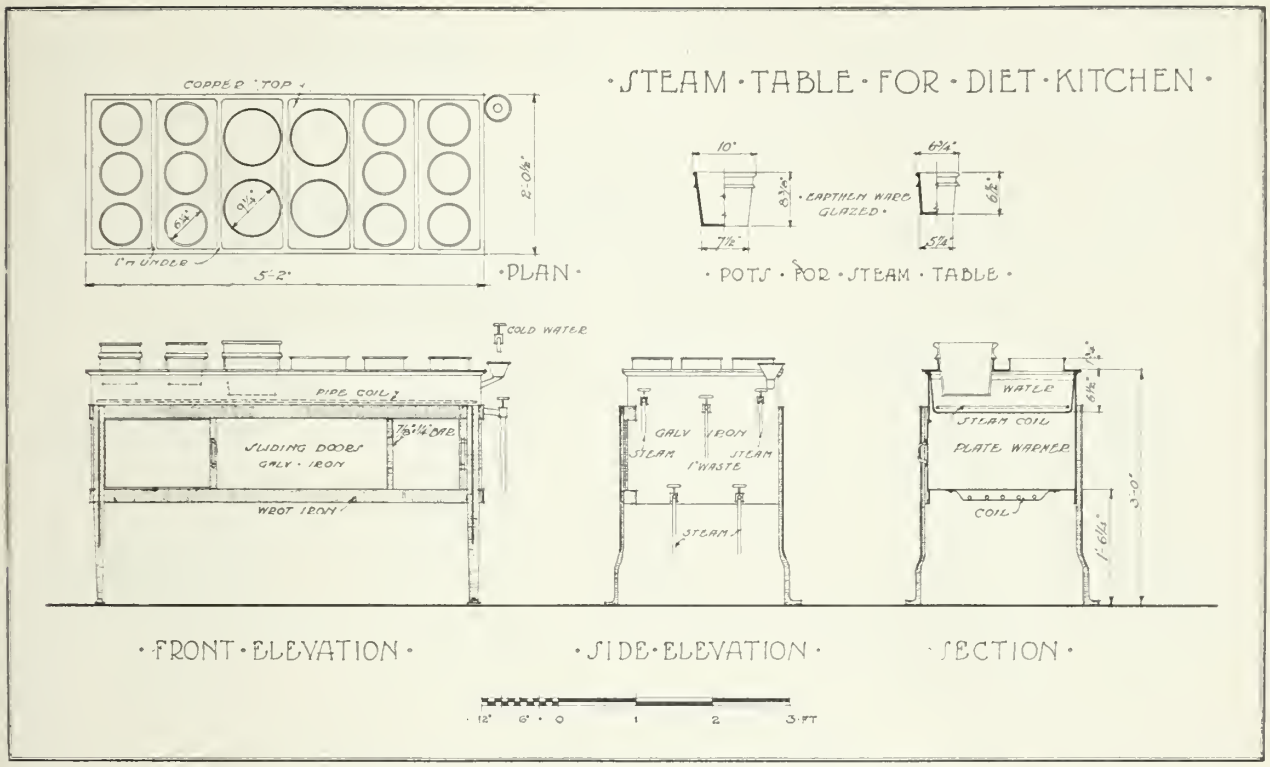


Fig. 2. Hospital furniture in use at the Massachusetts General Hospital.

encircling the field of operation to keep back those who do not properly belong to the operating force. This may be moved at will and placed in any part of the operating room. It is made from ¾-inch iron pipe and railing fittings. The feet are flanges, to which are bolted with countersunk bolts round wooden disks.

BED SCREEN.

The bed screen frame is made of ¾-inch iron pipe, with railing fittings. The arms of the screen are made of ⅜-inch iron pipe. Leather casters are used to lessen the noise in wheeling the screen about the ward. The basin stand and the tray stand are ordinary articles of hospital

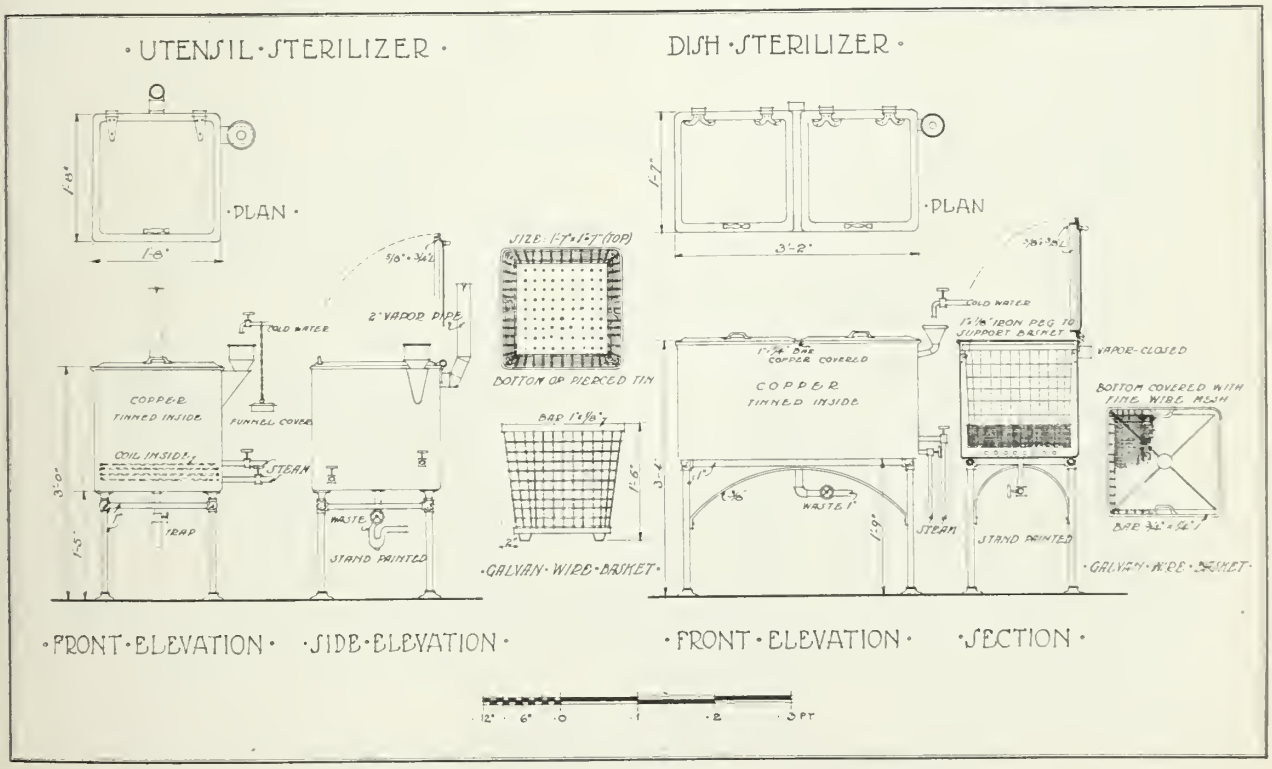


Fig. 3. Hospital furniture in use at the Massachusetts General Hospital.

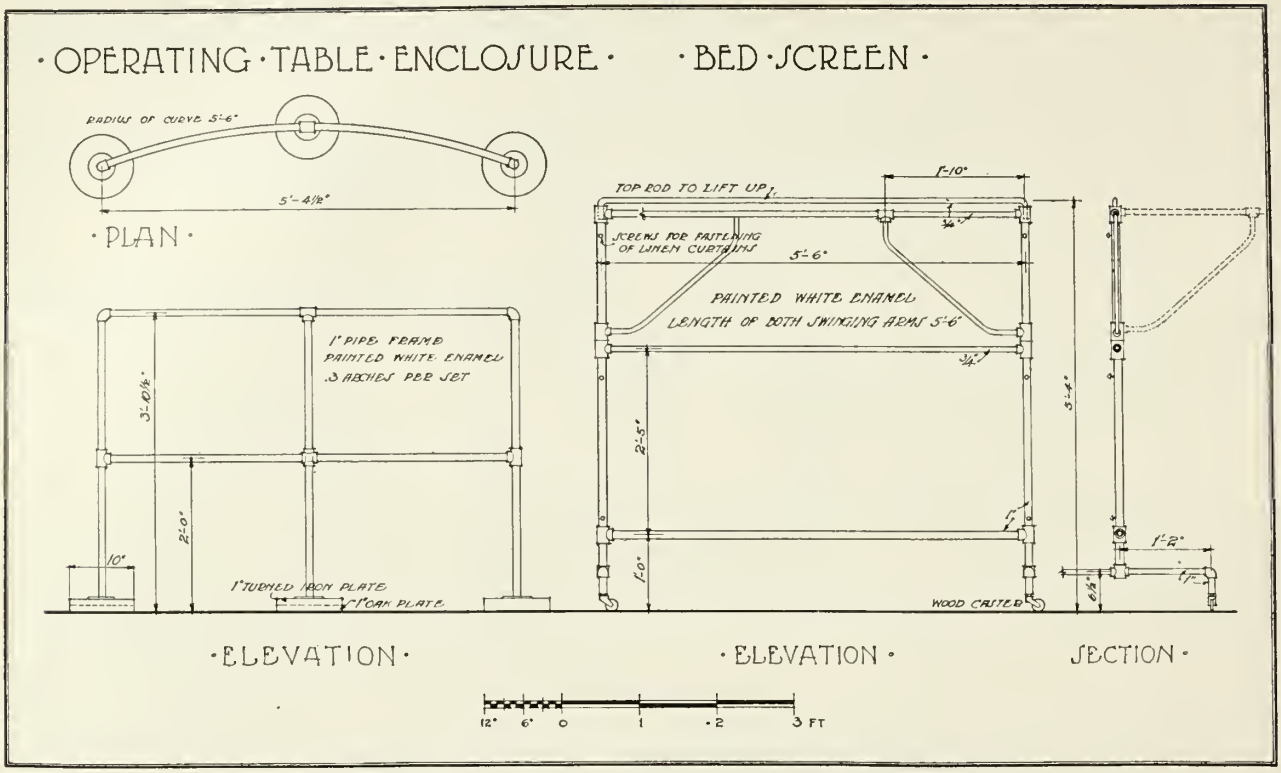

· OPERATING · TABLE · ENCLOSURE ·
· BED · SCREEN ·
RADIUS OF CURVE 5'-6"
5'-4½"
· PLAN ·
1" PIPE FRAME PAINTED WHITE ENAMEL 3 ARCHES PER SET
1" TURNED IRON PLATE
1" OAK PLATE
· ELEVATION ·
TOP ROD TO LIFT UP
SCREWS FOR FASTENING OF LINEN CURTAINS
PAINTED WHITE ENAMEL
LENGTH OF BOTH SWINGING ARMS 5'-6"
WOOD CASTER
· ELEVATION ·
SECTION ·
12" 6" 0 1 2 3 FT

Fig. 4. Hospital furniture in use at the Massachusetts General Hospital.

furniture. They are made of ¾-inch iron pipe. We call attention to them simply because they are made by our own mechanics.

DRESSING CAR.

The dressing car is a useful piece of ward furniture, which may be wheeled from bed to bed and saves many steps. It is made of ¾-inch iron pipe. The bed-pan rack may be made with or without a steam coil beneath it. The steam coil is a simple device for keeping the bed-pan warm. It is not essential, as the bed-pan may be readily warmed by dipping it in warm water.

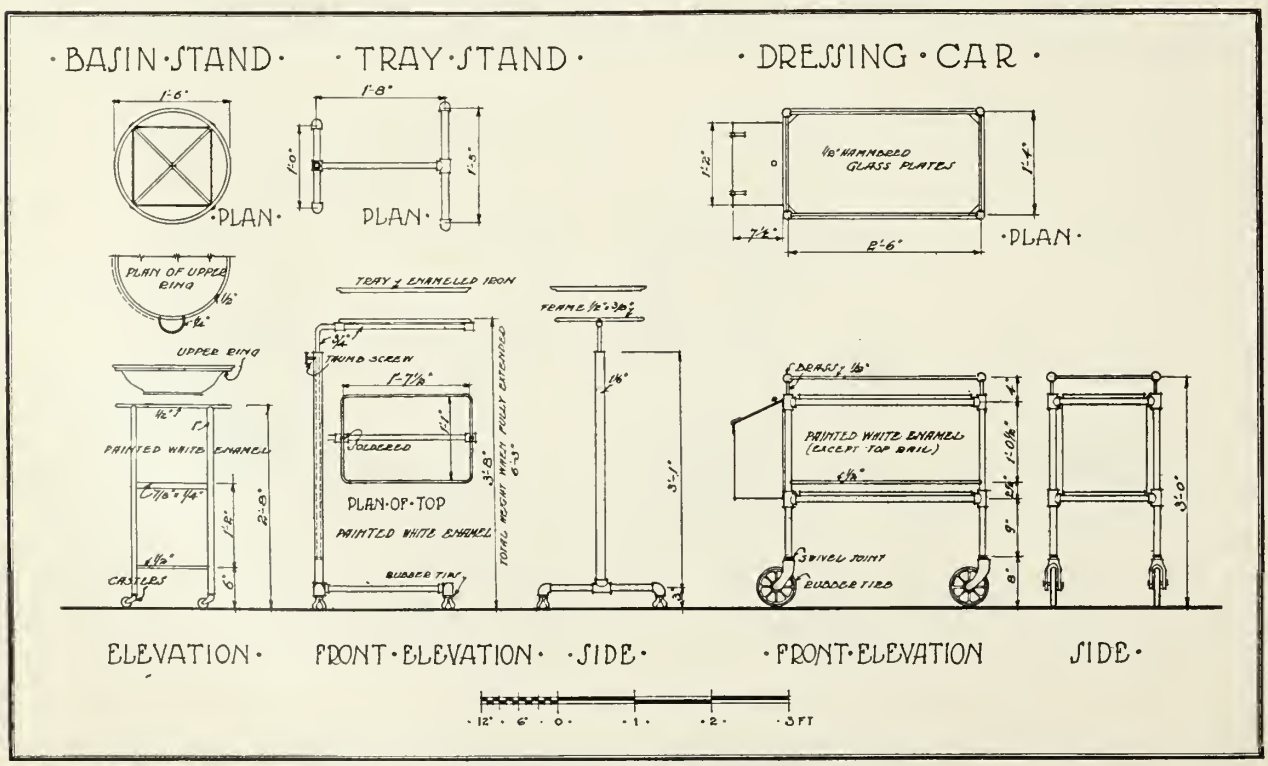


Fig. 5. Hospital furniture in use at the Massachusetts General Hospital.

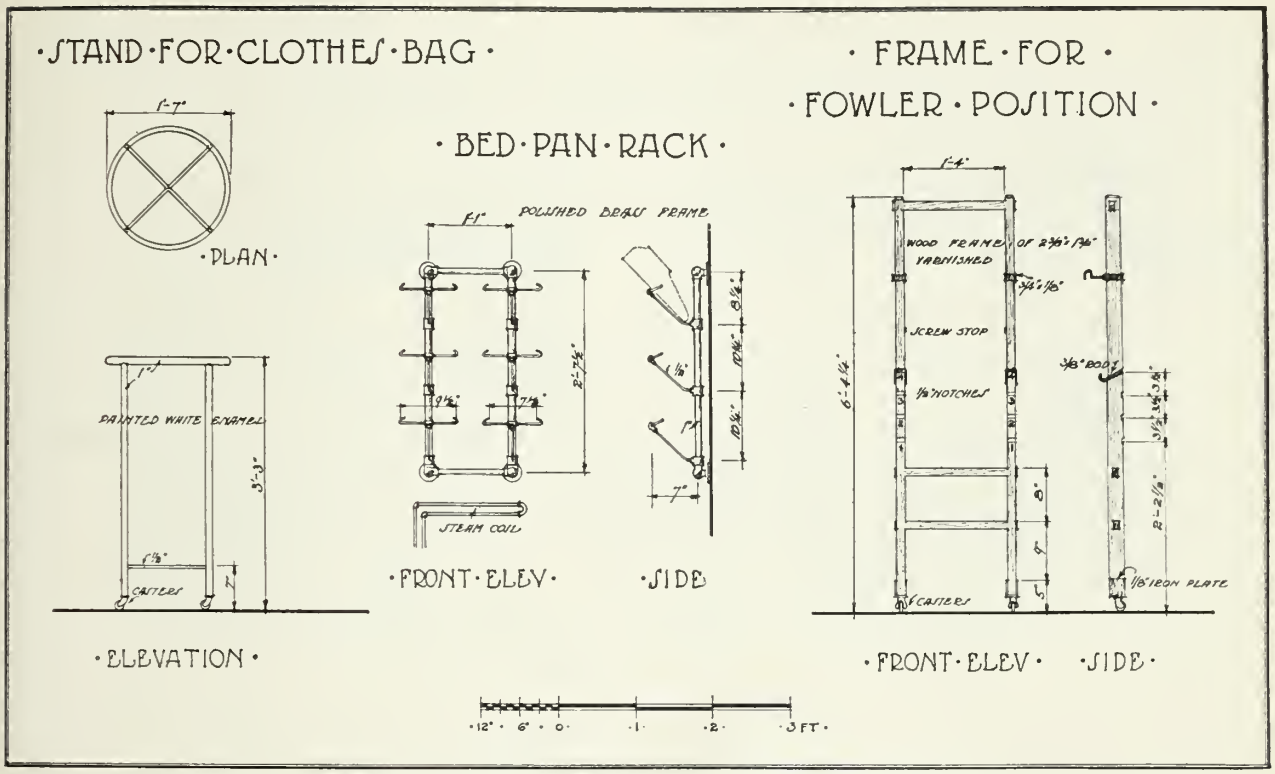


Fig. 6. Hospital furniture in use at the Massachusetts General Hospital.

WHEEL BED.

The wheel bed herein described is very satisfactory. The writer believes it was first devised by Dr. Donald J. Mackintosh, of the Western Infirmary, Glasgow. We have recently made over a number of our blacksmith beds to this type. It will be noted that the wheels at the head of the bed are not on swivels, and that when the bed is in place in the ward it remains there by coming down upon the bed posts at the foot. This permits a more orderly appearance to the ward than is possible by other forms of wheel beds.

PARCEL TRUCK.

The parcel truck is used for the distribution of parcels

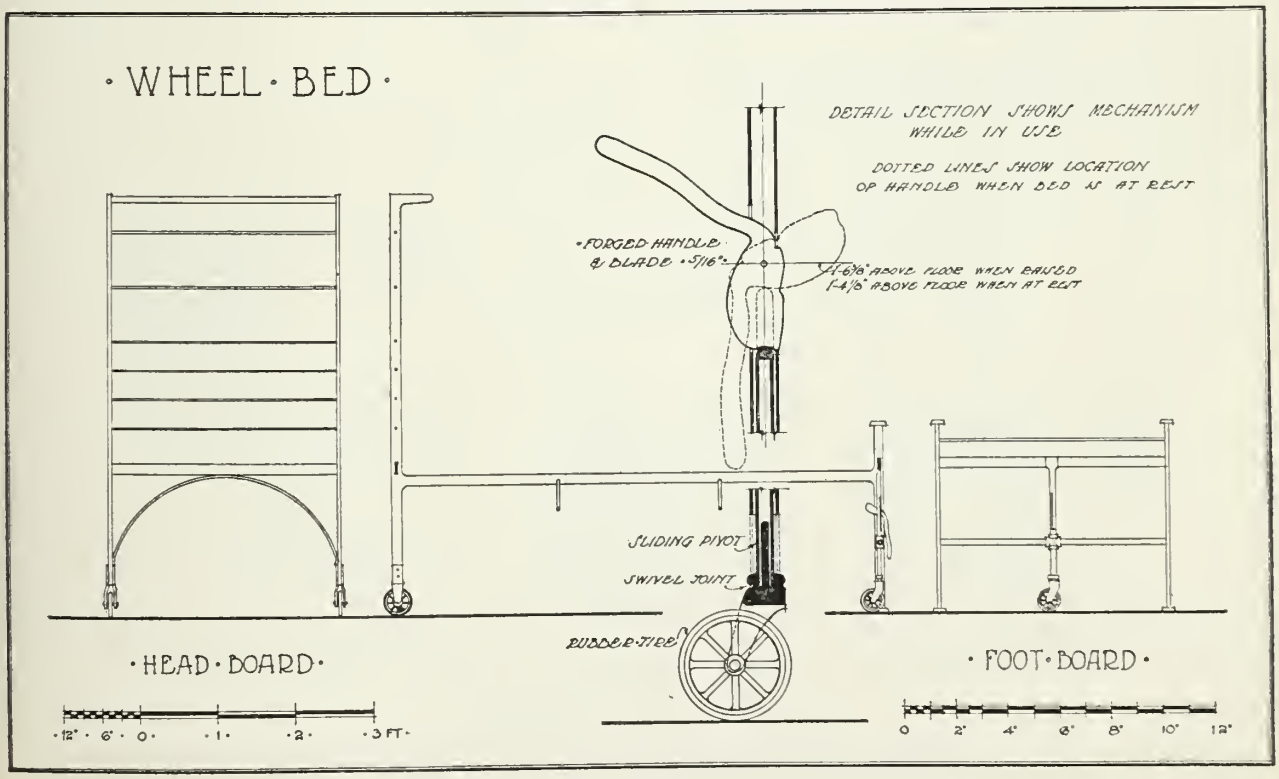

· WHEEL · BED ·
DETAIL SECTION SHOWS MECHANISM WHILE IN USE
DOTTED LINES SHOW LOCATION OF HANDLE WHEN BED IS AT REST
·FORGED HANDLE & BLADE · 5/16"
SLIDING PIVOT
SWIVEL JOINT
RUBBER TIRE
·HEAD·BOARD·
·FOOT·BOARD·
·12" · 6" · 0 · 1 · 2 · 3 FT ·
0 2" 4" 6" 8" 10" 12"

Fig. 7. Hospital furniture in use at the Massachusetts General Hospital.

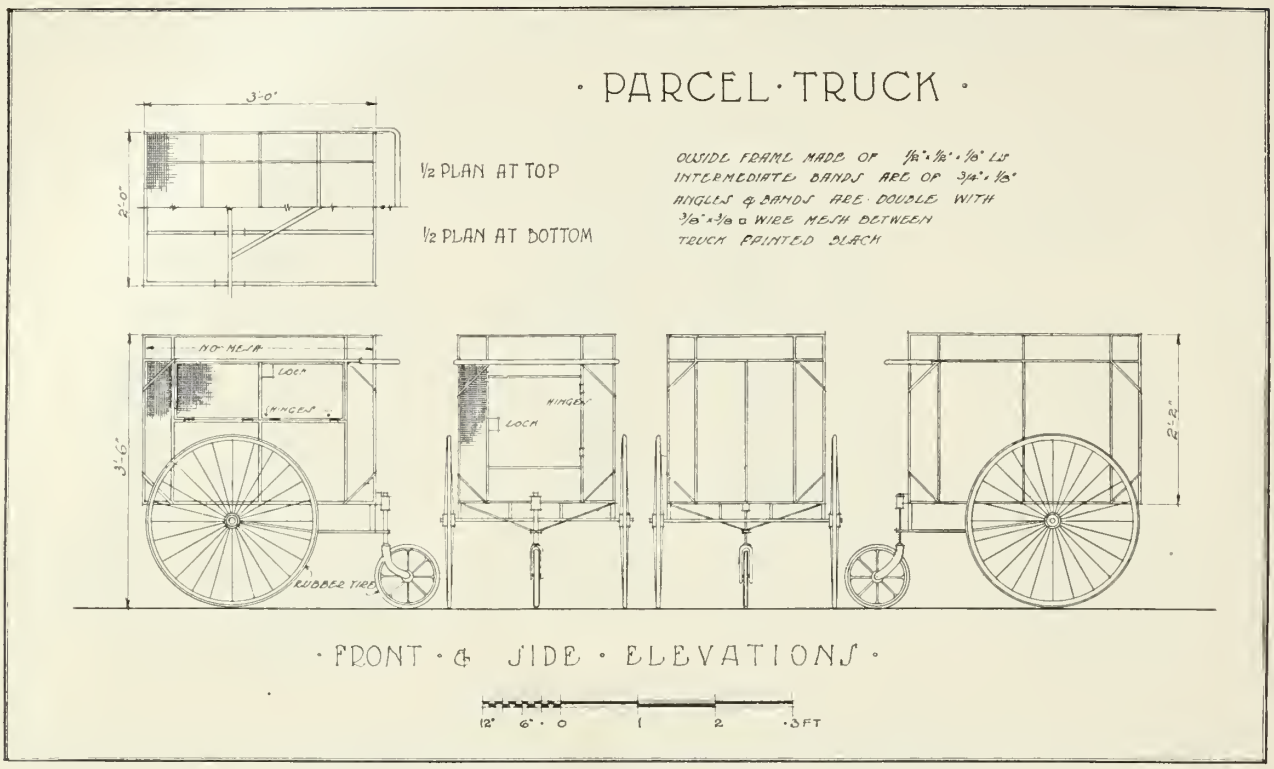


Fig. 8. Hospital furniture in use at the Massachusetts General Hospital.

received at the office. It is provided with a lock and key, so that there can be no excuse for lost packages in transit.

BLANKET WARMER.

The blanket warmer is a useful accessory of the operating room. The one which is made at this hospital is simple and effective.

WALL CABINET.

The wall cabinet is shown here for the purpose of illustrating the length to which we go in setting our furniture out from the wall. Practically no closed joints are allowed in new construction or repairs involving ward fixtures. The illustration also shows the sloping top,

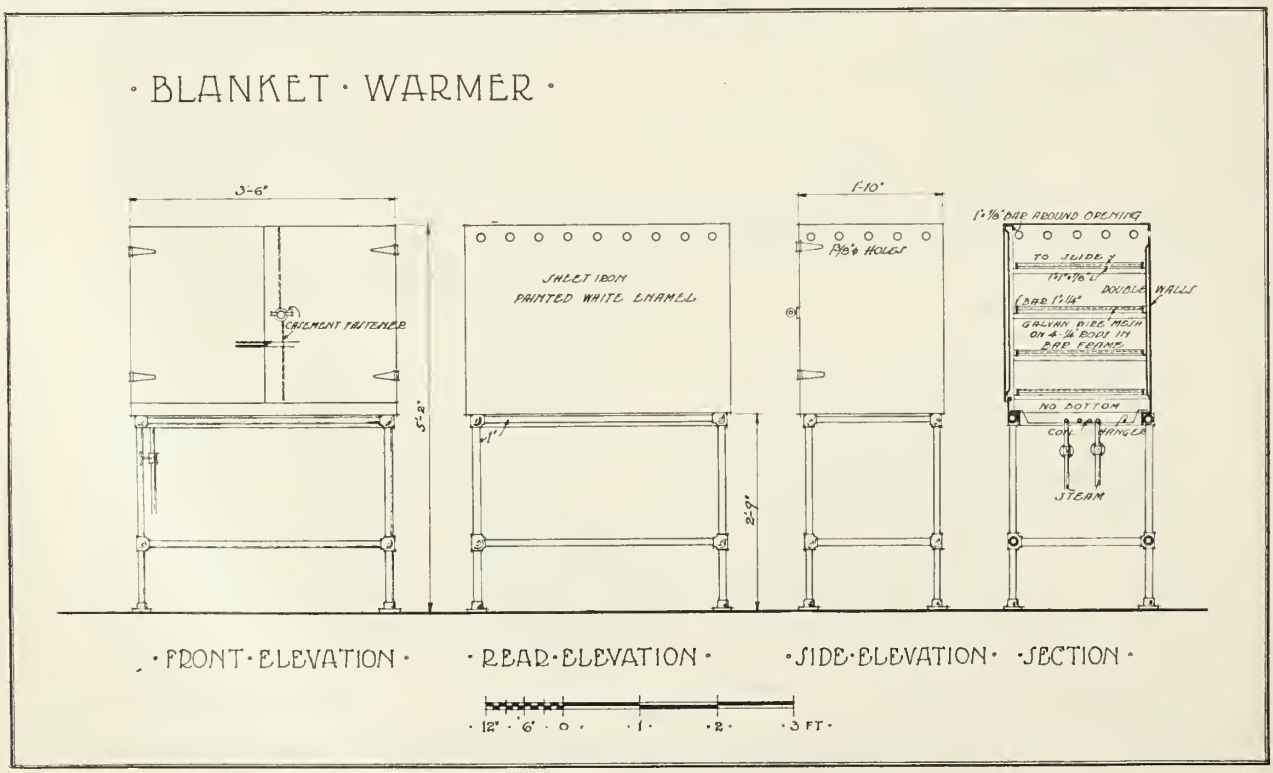


Fig. 9. Hospital furniture in use at the Massachusetts General Hospital.

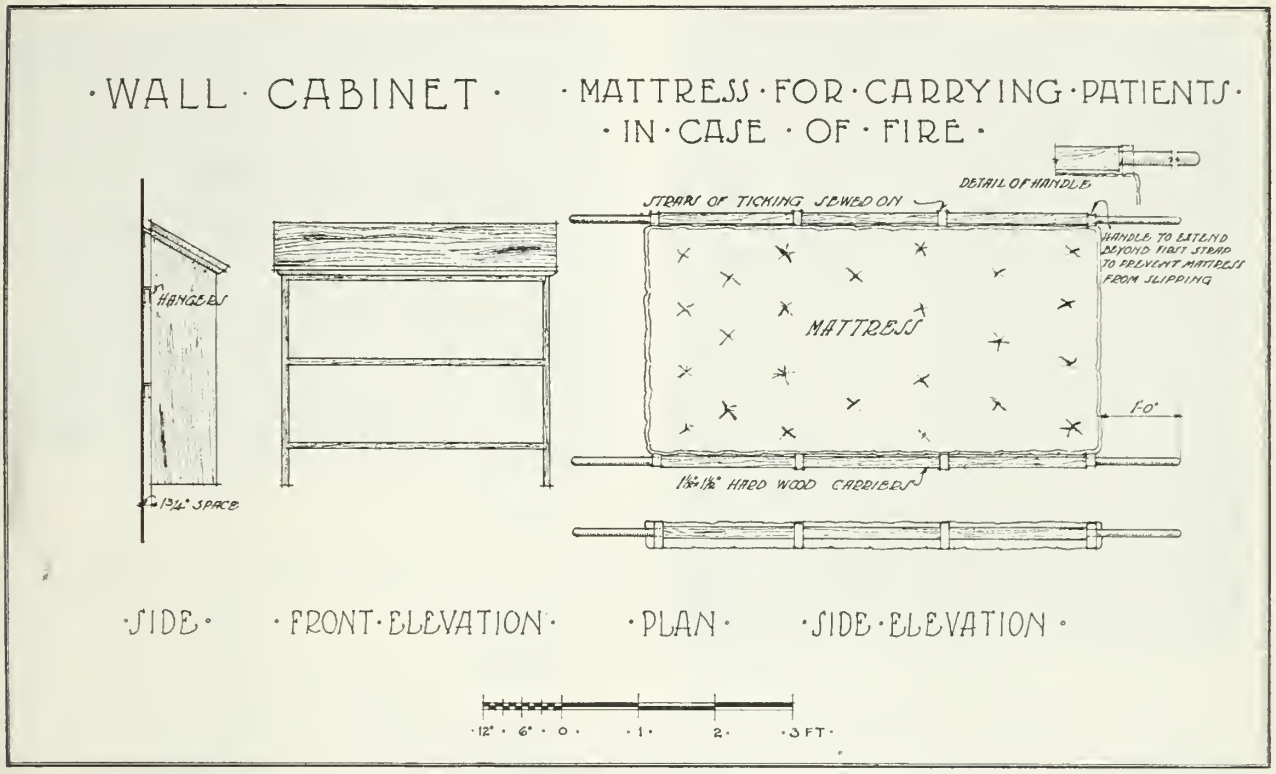


Fig. 10. Hospital furniture in use at the Massachusetts General Hospital.

which makes any accumulation of dust visible to the inspector.

FIRE MATTRESS AND POLES.

The upper mattresses on the hospital beds have loops sewed at the side, and poles painted red are stacked outside the wards. Note the extra long handles, and the fact that the end loop comes beneath the shoulder of the handle in order to prevent the slipping of the mattress when coming down stairs.

LIBRARY TRUCK.

The library delivery truck is used by the keeper of the patients' library in distributing books through the wards; it gives the patient an opportunity to look over a number of books and make his own selection.

Napkin Ring Holder and Ward Trays.

BY MISS JESSIE F. MAC KENZIE, SUPERINTENDENT PROVINCIAL ROYAL JUBILEE HOSPITAL, VICTORIA, B. C.

It has been my intention for some time to send to the department of "Home-made Hospital Appliances" in THE MODERN HOSPITAL a few items of interest, but matters pertaining to the European war have kept all of us very busy. Five of our graduate nurses have been called to Sal Cartier, and are now on their way across the ocean.

I send the photograph of a sideboard which I designed

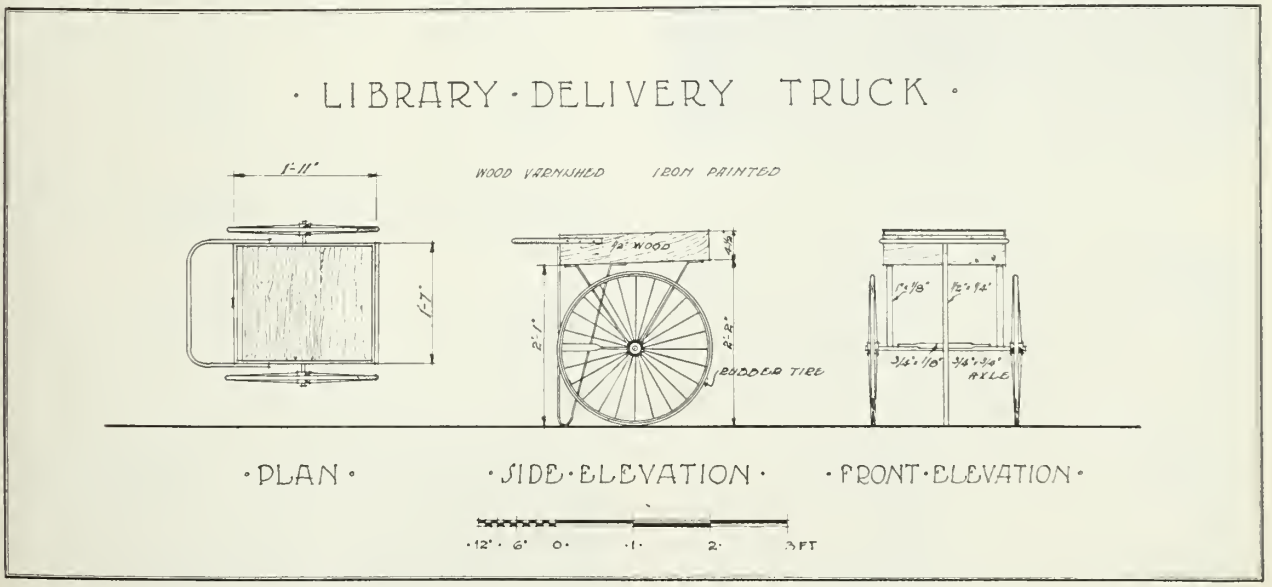


Fig. 11. Hospital furniture in use at the Massachusetts General Hospital.

Fig. 1. Sideboard, with cabinets for nurses' napkin rings.

for the nurses' dining room. Each nurse has a number, and her napkin ring bears a corresponding number, as does also the round pigeon-hole in the upper portion of the sideboard. When a nurse enters the dining room she takes her napkin out of its pigeon-hole, and replaces it on returning from that room. The back of the napkin container is removable, which permits the round holes to be thoroughly cleaned.

I send also the photographs of an emergency tray and a dressing tray, with lists of articles these trays contain. An emergency tray is placed at the bedside of the patient who has just returned from the operating room. The dressing trays are always kept in readiness, so that, if a doctor has occasion to do a dressing, he is not kept waiting.

Fig. 2. Emergency tray.

EMERGENCY TRAY.

Sponge forceps (2).
Bullet forcep.
Mouth gag.
Tongue depressor.
Spoon.
Alcohol lamp.
Matches.
Cotton.
Sponges.
Stethoscope.
Alcohol.
Whisky.
Camphorated oil.
Ether.
Distilled water.
Camphorated oil syringe.
Hypodermic syringe.

DRESSING TRAY.

Thumb forceps (2).
Hemostat.
Scissors.
Kocher probe.
Tap sheet, small.
Cotton.
Sponges.
Towels, sterile (4).
Bandages.
Nitrate of silver stick.
Collodion.
Adhesive, sterile.
Adhesive, unsterile.
Gloves.
Aristol powder.
Talcum powder.
Iodoform powder in blower.
Benzine.
Alcohol.
Peroxid.
Iodin.
Paper bag.
Kidney basin.

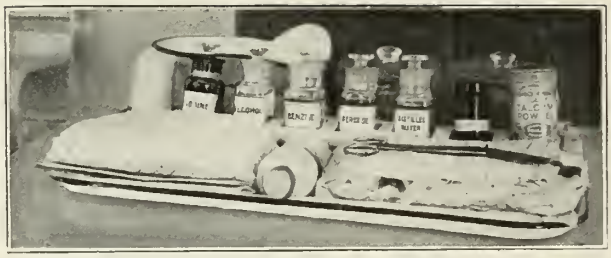


Fig. 3. Dressing tray.

In addition to the two trays of which I send photographs, we have the following trays containing the articles named:

LUMBAR PUNCTURE TRAY.

Sterile gloves.
Sterile test tubes.
Sterile towels.
Sterile sponges.
Sterile cotton.
Alcohol.
Iodin.
Collodion.
Ethyl chlorid.
Sterile needles.
Z. O. adhesive plaster.
Scissors.

EYE COMPRESS TRAY.

Alcohol lamp.
White enamel basins (2).
Pus basin.
Tin vaseline.
Adhesive strapping.
Box matches.
Anatomical forceps (2).
Scissors.
Bath towel.
Surgical towels (3).
Eye pad.

HYPODERMOCYLSIS TRAY.

Glass percolator, 1,500 cc.
Glass graduate, 500 cc.
Pitcher, 2,500 cc.
Florence flasks, 1,000 cc. (2).
Kidney basin.
Hypodermocylsis needles, sterile (2).
Z. O. adhesive plaster.
Seissors.
Hemostats (2).
Ethyl chlorid.
Sterile cotton.
Sterile sponges.

NEUROLOGIC TRAY.

Essence of peppermint.
Tincture of asafetida.
Ammonia.
Sugar.
Pepper.
Salt.
Pins.
Needles.
Toothpicks.
Cotton sponges.
Basin.
Electric battery.
Hot water in test tubes.
Cold water in test tubes.

PREPARATION TRAY.

Small round basins (3).
Kidney basin.
Tincture of green soap.
Alcohol.
Ether.
Razor.
Toilet paper.
Towels (2).

STOMACH TRAY.

Stomach tube, with bulb.
Stomach tube, without bulb.
Funnel.
Round basin, sterile.
Round basin, unsterile.
Kidney basins (2).
Pitcher, 2,500 cc.
Glass graduate, 500 cc.
Rubber sheet.
Glass of water and small tray.
White enamel pail.

MEDICAL TRAY.

Gloves.
Percussion hammer.
Metal tape, metric.
Vaseline.
Blue pencil.
Tongue depressor.
K. T. lubricant.
Towels.
Ophthalmoscope.
Electric light.
Pins.
Toothpicks.

CATHETER TRAY.

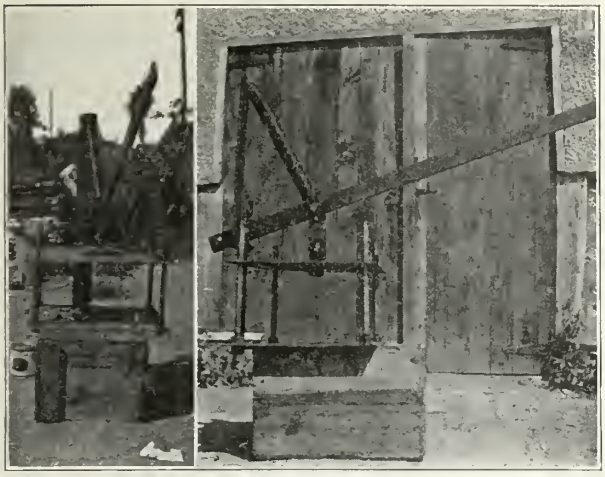
Catheter pot.
Glass catheters (2).
Glass graduate.
Kidney basin.
Small basin.
Sterile towels.
Sterile sponges.

SMEAR TRAY.

Alcohol lamp.
Matches.
Alcohol.
Cotton.
Slides, glass.
Copper wire loop, with solid glass rod.

Another Can Masher.

Some months ago Mr. Bacon, of the Presbyterian Hospital, Chicago, showed in this column a device for flattening out empty tin cans. Mr. P. W. Behrens, superintendent of service at Lake Forest University, sends in the accompanying illustration of another device for this same purpose. The mechanism is obvious. One or more cans



Behren's can masher.

are set under the plate and the powerful lever is brought down upon them. The work is done very quickly, and the cans are mashed very flat.

Infant Bath Table.

DESIGNED BY DR. ANNE H. M. SHARPE, SUPERINTENDENT NORTH CHICAGO HOSPITAL.

The table is not expensive, yet it seems to meet the requirements of a limited nursery service. It is light, portable, easily kept clean, strong, and durable. The design is

Infant bath table.

obvious, and the table can be folded. The basin is removable, and the soap dishes are merely nests stamped in the table top. The size is 44 by 22 inches, 36 inches high, and the total weight is 35 pounds.

A free dispensary and hospital, which it is proposed to conduct along the lines of the Mt. Sinai Hospital in New York, was opened in Springfield, Mass., in October. The establishment of the institution was made possible through a gift from a man whose name has not been made public of $1,000, with which to begin the work. The same man has given assurance of further support in the event that other persons of means show an inclination to cooperate. Dr. M. L. Slutskin is in charge of the dispensary, with Dr. Nathan Fialke, of Holyoke, and a nurse as his assistants. Patients will be charged 25 cents for registration and 25 cents for the necessary drugs and medicine. Cases of childbirth will be handled for something less than $5. All other treatment will be free.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Every once in a while somebody connected with the hospital proposes to knock out a partition here or build one in there. Better think about it before you go ahead. Never a hospital was built that exactly fits every purpose for which it was intended, and, even if it was precisely in accordance with the necessities at the time it was planned, conditions change; the proportion of certain classes of patients changes, or it becomes necessary to do things differently from the old way to meet new requirements of the doctors. Sometimes the knocking out of a wall and the putting in of a door or archway will do wonders in the way of economical administration.

A good many superintendents have an idea that there is something very mysterious and almost unattainable in what we understand by the term "good technic" in the medical care of hospital patients. That isn't true; elaborate equipment is unnecessary, especially in a small hospital, and the simpler the technic, the better. There must be a laboratory as an aid to diagnosis; it need not cost more than $500, even if everything has to be bought at once, and there must be at least one ward set consisting of a blood counter, a blood pressure apparatus, and a hemoglobinometer. There is scarcely a town of 5,000 population in the country that does not number among its medical profession someone who has had laboratory training sufficient to do decent laboratory work and use the apparatus. The rest of the scientific work depends on organization and the institution of proper methods. Lean on your medical staff for guidance, and, if they fail you, call in some young medical man who is not on the staff, and who has served an internship in a good hospital. Play your medical men against each other, and see how quickly they will wake up.

The hospital milk situation is not in good condition. Only recently a hospital was found which was engaged in the very serious and to them important work of pasteurizing their milk after it came to the institution—milk that had already been pasteurized by a commercial distributing concern. What arrant nonsense this is, and how it goes to show what creatures of routine and habit we are! If milk is not good when received, it had better be pasteurized, but a double pasteurization is nonsense, and clean, fresh milk ought not to be pasteurized at all, unless it is formula milk for sick children. It is not a difficult matter for the pathologist to find harmful microorganisms in milk by plating out cultures and using his microscope. If there are no, or very few, colon bacilli in milk, and no tubercle bacilli and no streptococcus—showing inflammatory conditions or abscesses in the cow's udder—a moderately high bacterial count is not very harmful, because the bacteria are of the lactic acid variety and are physiologic rather than pathologic. Sour milk is not necessarily a dangerous milk, although the bacterial count is away up. There are two harmful forms of milk—one in which there are numbers of pathogenic microorganisms, and the other is milk that has been allowed to stand until the bacterial toxins of these immense numbers of bacteria, which are not destroyed by pasteurization, are sufficient to do great harm to sick people, and especially to sick children. This milk is highly dangerous because the absence of bacteria gives an unwarranted security.

Four cottage ward buildings and a separate kitchen have lately been completed for the Northern Hospital for the Insane at Sedro Wolley, Wash. All of the buildings are connected by underground passageways.

NEW INSTRUMENTS and APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

A New Bandage Fastener.

A little device for fastening bandages securely and neatly has recently been introduced, and is offered by the supply houses under the name of the Swope bandage fas-

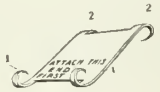


Fig. 1. Swope bandage fastener.

tener. After the bandage is applied to the injured member, the loose ends are folded under for about one inch. The bandage fastener (Fig. 1) is introduced into the

Fig. 2. Bandage fastener applied to finger and wrist bandage.

folded end, with the ring parts (Fig. 1) pointing upward, leaving the ring hooks pointing downward. By slightly pulling the bandage down, the lower hooks are

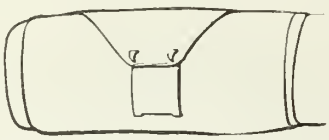


Fig. 3. Bandage fastener applied to arm bandage.

pushed into the bandage and held securely. The hooks are turned in and well rounded, thus preventing injury from the sharp points. Fig. 1 shows the actual size of the fastener, and Fig. 2 illustrates the application of the device to bandages on finger and wrist.

Universal Extension Apparatus.

DESIGNED BY DR. CARL J. SWENSON, CHICAGO.

There are a number of devices on the market for the purpose of securing proper extension in cases of fracture of the extremities, but none of them seem to be so universally adjustable and so easily applied as the apparatus which is illustrated here. It consists of an adjustable clamp (Fig. 1), which has a bayonet-shaped rod, with a grooved safety pulley at the top and a rod for holding the weights. Adhesive plaster strips 1 inch wide and 12 inches long are applied to the leg, and similar strips are passed through the opening in the foot plate and doubled back on themselves. These loops are then fastened with safety pins to the leg strips above the ankle. The clamp

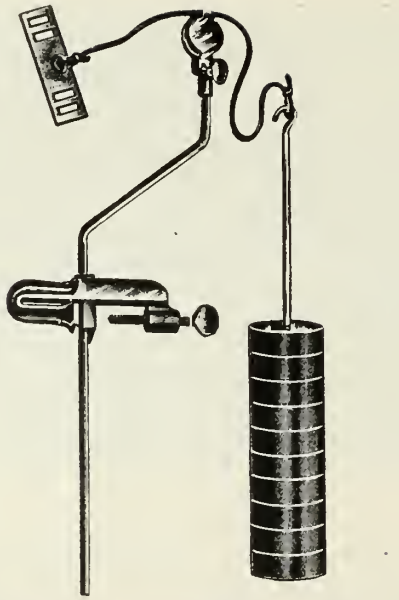


Fig. 1. Swenson's universal extension apparatus.

Fig. 2. Swenson's extension apparatus applied.

is then applied to the rail of the bed (Fig. 2), and the necessary number of weights (each weight 1 pound) are placed upon the rod provided for this purpose. The whole procedure can be accomplished in a few minutes.

Apparatus for Duodenal Feeding.

BY DR. MAX EINHORN, NEW YORK.

The difficulty of proper nutrition of patients suffering from ulceration of the duodenum of the stomach, dilation of the stomach, nervous vomiting, certain diseases of the liver, etc., have led Dr. Einhorn to devise what he claims to be a safe and efficient method of feeding such patients, while at the same time putting their stomachs at rest, and for this purpose the doctor has designed the apparatus illustrated (Fig. 1). The apparatus consists of a glass syringe, the plunger of which is wound with a sterilizable mineral packing, tube with stopcock leading to duodenal tube (B), three-way stopcock (C), tube D leading to fluid F, container G, and table support T. When the lever C is turned parallel with A, fluid can be aspirated from the

glass container into the syringe; and when lever C is turned parallel with B, the fluid from the syringe can be introduced into the duodenum.

Fig. 1. Einhorn's duodenal feeding apparatus.

Dr. Einhorn states that in normal cases it will usually take from two to three hours for the tube to pass into the duodenum, but in cases where one may have to deal with pyloric spasms, it will take much longer, and there are cases on record where it took twenty-four and in one case even thirty-six hours. The food is usually given every two hours, eight feedings a day. The standard food

Fig. 2. Patient being fed through duodenal tube.

is milk, 7 to 8 ounces, or 1 egg. When patients cannot take milk, water with barley or pea flour is substituted.

Fig. 2 shows a patient being fed through duodenal tube, but it is stated that the patient very soon learns to administer the food himself. The term of treatment as given is from ten to fifteen days, and the tube stays in the duodenum during this entire period.

A Device for Supporting the Arm.

BY DR. A. B. EUSTACE, CHICAGO.

The splint illustrated here (Fig. 1) is a modification of an axillary splint devised some years ago by Dr. A. Radcliff, of Waukeegan, Ill., and recently improved by Dr. Eustace, so that it is now a perfect support for the arm in all conditions where edema and inflammation are in evidence. The wearing of such a splint following an operation of carcinoma of the breast, especially when a radical operation has been performed with axillary dissection, is of great benefit. Other surgical operations where the splint may be adapted are fracture of the bones of the forearm, dislocation of the wrist and the elbow joint, following application of skin graft to the arm or

Fig. 1. Eustace arm supporting splint.

the axilla, etc.—in fact, in all cases where the arm should be put at rest for some time after surgical interference—as the splint will form a firm support to the arm, hold the extremity in a fixed position, and relieve all tension upon sutures.

Fig. 2. Eustace arm supporting splint applied.

The device consists of four parts—a belt with strap and buckle, three forks, a wire frame, and suspenders. The belt is made of a steel band three-quarters of an inch in width, which is padded and covered with leather, and a strap with buckle attached. The steel rod passes down from the base of the fork proper, the lower end of which is threaded and fits into a cylinder (E), which is likewise threaded, thus allowing one to regulate with ease the height of the forks as well as to adjust them perfectly

to the arm. At the lower end of the cylinder a smaller fork (F) fits on to the belt and is fastened to it with a screw.

The device is easily adjusted in a few minutes, so that it may be used for either the right or left arm. The application of the splint is a very easy matter. The belt is fastened around the waist at a level with the iliac crests, and the suspenders then fixed in position and strapped so that they will support the weight of the arm when placed in the wire frame. The latter is then covered with a roller bandage, which extends back and forth from the wire on one side to that on the other. This bandage is applied loosely, which allows it to form a trough in which the arm is placed, its position being as shown in Fig. 2. As this splint is made adjustable in all directions, it seems especially adaptable for hospital use.

Esophagoscope.

DESIGNED BY DR. R. LEWISOHN, NEW YORK.

In this age of specialized medicine and surgery, men are devoting their entire attention to certain parts of the human body, and therefore laryngeal and bronchial cases are understood to belong in the sphere of the nose and throat specialist. It is different, however, with the esophagus and stomach. The surgeon as well as the internist considers such cases within his province. This work has received a great deal of attention during the last few years, and quite a number of special instruments have been devised for examination, operation, and treatment, and one of the most ingenious is the Lewisohn

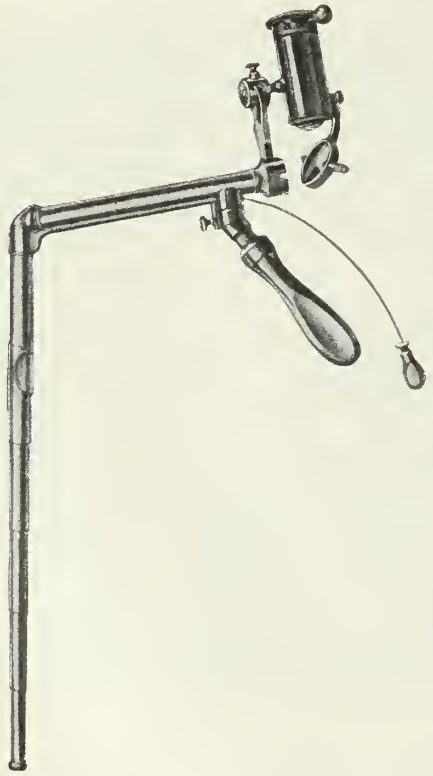


Fig. 1. Rectangular telescopic esophagoscope (telescope opened).

esophagoscope (Fig. 1). This instrument consists of two parts, which are joined together at almost a right angle—the first, horizontal part, which is in the mouth of the patient during examination, and, second, the vertical part, consisting of a telescope, composed of six separate tubes, which may be pushed down into the esophagus as far as necessary. The horizontal part consists of two sections which can be easily separated by traction in a horizontal direction. Each of these sections carries a semi-cylindrical canal, and when the two sections are connected the canals form a tube. In this tube is the spring that is necessary for the manipulation of the telescope. The spring is entirely outside of the main hori-

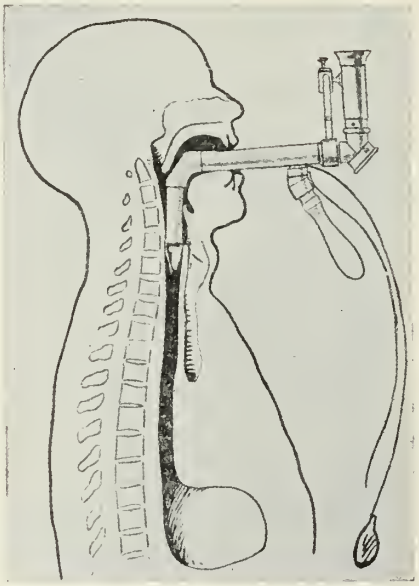


Fig. 2. Esophagoscope in position with telescope closed.

zontal tube, and does not in any way disturb the passage of the light rays. At the proximal end of the horizontal tube which is outside of the mouth is attached the illuminating apparatus, which consists of a lamp and condenser. A tungsten lamp containing three cross filaments is used, and produces a very intense light. Directly under the lamp a condenser is placed that concentrates the rays

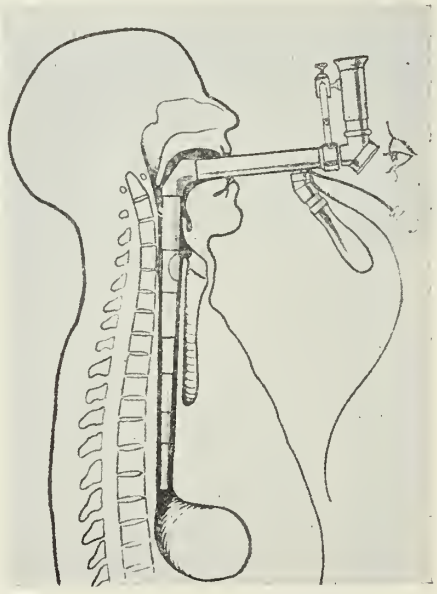


Fig. 3. Esophagoscope in position with telescope opened.

that fall on the mirror, which is movable on a horizontal axis. From this mirror the rays are thrown on a second mirror at the junction of the horizontal and vertical parts of the instrument. The second mirror intercepts the rays in such a manner that they fall directly downward in the telescope.

DEPARTMENT of NURSING

Are Our Nurse Training Schools Educative?[1]

BY MARY ARD MACKENZIE, R. N.,
Superintendent Victorian Order of Nurses, Ottawa, Canada.

In this paper the writer may state a number of facts and ideas which have been presented elsewhere, but she is anxious to put the matter in the full light, so that something definite may be done, and done soon, to correct a condition of affairs which should never have come into existence.

Very much thought has been given to the nurse training school question, and all kinds of schemes suggested for the improving of the training, but practically no scheme has been considered seriously that really promises to solve the problem. In dealing with it, we feel that we must divest ourselves of all preconceived notions and go in with an open, unprejudiced mind.

Are our nurse training schools educative? Let us look for a moment at the meaning of education. "Education" is derived from the Latin root, "duco" (I lead or draw) and "e" (out), so education is a drawing out—a development of the whole being. When a woman enters for an education or training of any kind, she should have her whole being drawn out, developed, as her knowledge increases, and no course which does not make for that full development can rightly be called educative.

Now, with that as a guide, let us look at our nurse training schools. What is happening all over the country? The writer could name dozens of bright, promising women whom she has seen, filled with the missionary spirit, eager to do something to help someone to be better, happier, and healthier, who have entered on a training in the various so-called training schools, issue forth from these institutions warped, narrow, mercenary, and blase—all their ideals gone, and in almost every case gone beyond recall. To be very conservative, nine-tenths of the students who enter our nurse training schools come out after three years changed for the worse.

Now, why is this? Glance at the hours, glance at the drudgery, glance at the impossibility of keeping up with the ordinary means of culture—church, theater, lectures, music, art, mingling with different kinds of people, and exchanging ideas on literature, art, or science. How many nurses keep up their church life, keep up with their studies—even with their nursing studies—keep informed as to current events? How many keep up their correspondence with old and valued friends even? Very, very few indeed; so, on the most important side—the development of character—our nurse training schools are a woeful failure.

What about those on the professional side?—on the side of knowledge, pure and simple? Do our nurse training schools prepare the nurse for the full practice of her profession? Let us look—the training they receive is merely in institutional nursing—that is, in ward nursing—and sometimes in operating room technic. How little preparation is given for private nursing, and practically none is given for the large field of public health and district nursing, social service work, and hospital administration. When we consider the failures in the many lines of nursing, we are surprised that there are not a great many more than there are.

Why has the nurse education been put on this basis? To be honest, we must answer, "in order to secure cheap nursing in the hospitals." For all these years our women who have desired to be equipped for their life-work have been exploited, so as to keep down expenses, and many a woman on leaving her school has felt herself cheated, deceived; she has asked for bread and received a stone.

What about theory? A lecture course is given? Oh! yes. By specialists in the various branches? Oh! no. A lecture course is given by doctors who are willing to do so in charity, and, like a great deal given in that way, many of the lectures would be much better undelivered, and these lectures are given to tired-out nurses who cannot grasp what is being put before them.

What is to be done? Establish nursing colleges or schools in connection with the educational system. Why has the education of the nurse been hidden away in a hole as something not to be mentioned?

These schools or colleges should be as separate from the hospitals as the medical schools. The students would obtain their practical training in the hospital, where a regular prescribed course should be given in all departments, under the direct supervision of experienced teachers, and it would be found that the average student would acquire skill—say, in the making of beds—in a much shorter time than under the present regime; so, too, with a great many other things.

In the schools there should be a regular staff of paid lecturers, and no longer would the pathetic and undignified sight be seen of student nurses holding out the hand to charity—that is, depending for their theoretical training on the kindness of voluntary lecturers. There should be a regular pass course, with certificate at end of examinations, practical and written, are passed. Then there should be honor courses or special courses in district nursing, public health work and social service, in hospital administration, and in the training of teachers of nurses, for which special certificates or degrees would be conferred. These certificates would be registered at the educational department, thus removing any need for further registration. The nurse coming forth would be a well-rounded-out woman, would be alert and ready for her life-work, and to take her place as a citizen—not weary, fainting and discouraged on the very threshold, cut off from her fellow men and women. Let her be apart, but in a broader and higher sense than that.

The decrease in the number of desirable applicants for training throughout the country is a silent protest against the worse than noneducative course which is being offered in our training schools. Never before in the history of the world did we need the really cultured women with high ideals, to train for all branches of public health service, as we do now. We must attract the right kind of woman, and in order to do that, we must prepare for her a truly educative course.

It may be difficult to get the whole machinery started, but it is possible, and it is imperative that something be done, and done quickly, to meet the demand for an educative nurse course and the demands for educated nurses to do the work which only such can do.

[1]Read at the annual convention of the Canadian Society of Superintendents of Training Schools for Nurses, July, 1914.

It is vain to attempt to "bolster up" the profession by "bills of registration" and similar means—the wrong is at the foundation, and we must go back and wipe out that wrong beginning, in so far as possible, and start with a clean slate.

It will cost money, but it will be money well spent. In each province the education department should make provision for the nurses' course. It should be part of the public school course in the preliminary stages—and already the minds of the people have been prepared for this by the report of the royal commission on vocational training—then, in the more advanced stages, provision would be made for the courses in public health nursing, social service, training of teachers of nurses and hospital administration. There would be chairs of nursing established in our universities. There will doubtless be a great deal of planning necessary, or readjusting, but that must be faced.

To sum up, the training schools fail in that they do not educate their students—they fail on the professional and on the character-building side. The profession for that reason is not attracting the kind of women who are needed for all branches of nursing. There are hundreds of women desirable in every way who would enter for a nurse training course every year if the training schools were as they should be. Not only is the profession losing these desirable candidates, but a decided wrong is being done the women in that they cannot obtain an efficient training in that line of activity in which they feel they could best work out their destiny.

So, most earnestly, do we entreat the educators, those who know and deplore the defects in our present system, and those who are interested in the training of the women of the land, to do what they can to have this state of affairs corrected, for it affects the whole nation in no small degree.

Ophthalmia Neonatorum and the Nurse's Duty.

There are so many nurses who do not understand their duties and responsibilities regarding the care of the eyes of new-born infants that some associations of nurses and some state boards of examiners for the registration of nurses have resolved to let no opportunity pass without impressing the necessity for study of the laws regarding them.

The Society for the Prevention of Infant Mortality has been of the utmost service to the country at large in this respect. Indeed, if the whole truth were known, it would doubtless be an established fact that their crusades were instrumental more than any other one force in securing the enactment of the present laws for the prevention of blindness among babies.

In Massachusetts, where the law is drastic (not more so than it should be), and its enforcement prompt, there have been great reductions in the number of infants whose sight has been lost through ophthalmia neonatorum. To quote the law:

"Should one or both eyes of an infant become inflamed, swollen, and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative, or other attendant having charge of such infant to report in writing, within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside the fact that such inflammation, swelling, and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more than $100.

"If one or both eyes of an infant whom, or whose mother, a physician is called to visit become inflamed, swollen, and red, and show an unnatural discharge within two weeks after the birth of such infant, he shall immediately give notice thereof in writing, over his own signature, to the selectmen or board of health of the town; and if he refuses or neglects to give such notice, he shall forfeit not less than $50 nor more than $200 for each offence."

In case the infant is born in a hospital, the hospital is held responsible with the physician in charge of the case for the care and attention given the eyes of a baby at birth, for the law distinctly says:

"Each licensee shall be responsible for the use at every birth, for the prevention of ophthalmia neonatorum, of either the 1-percent solution of nitrate of silver furnished to physicians by the state board of health, or some similar preparation having the approval of said board.

"A licensee shall send notice in writing to the state board of health, within six hours after the discharge from his lying-in hospital, of an infant whose eyes show or have shown the presence of ophthalmia neonatorum, stating the destination of said infant. A duplicate of the notice shall at the same time be sent to the state board of charity."

It is only within recent years that hospitals maintaining wards for the care of maternity cases have been obliged to be licensed by the state, but for the enforcement of the above laws it became necessary.

There are other safeguards of the infants' welfare found in these laws, and hospitals would do well to be correctly informed concerning them, but ophthalmia neonatorum is the one about which the nurse should be most concerned.

It is sometimes difficult for the nurse to fulfill the law when the physician in charge of the case objects to the use of any of the forms of treatment mentioned therein. No advice can really be given her in such an event, excepting that she should be tactful and altogether courteous, and, above all, not dictatorial in the least. A law-abiding nurse once said to an eminent physician, "It is rather too bad that the law puts so much authority in the hands of the nurse, for it seems to me she has it within her power to cause the physician embarrassment, if nothing more." "Not at all," said he, "let him be informed of the law and obey it; the time for that form of courtesy has gone by, and the sooner he understands that the world is not going to take off its hat to him simply because he is a doctor, the better for him and the whole medical profession."

Notwithstanding this argument, it would be a sad time if the nurse were to forget that the physician is the commander-in-chief of the army in which she is only a private.

Doubtless most of the states have laws regulating the care of the new-born, and the nurses practicing in those states ought to faithfully obey them. In the absence of laws, they can still do much by absolute cleanliness and watchfulness. Nurses must remember that any infant whose eyes show the first indications of swelling and redness must have *immediate* attention. Such a condition must be reported the same minute that it occurs; the results are apt to be too serious to admit of waiting to see how it may be later.

The Red Cross.

To those across seas there has been no more convincing evidence of the neutrality of our country as well as of Christian charity toward the present European warfare than the dispatch of the Red Cross ship to aid in the care of the sick and wounded of all classes of belligerents.

There have been many among the left-at-home friends of the nurses who expressed doubts of the wisdom of sending nurses into the midst of so much danger when possibly their services were not really demanded. In this the friends were guided wholly by impressions received from imperfect and exaggerated newspaper accounts. But, no matter what may have been the ideas of friends, the nurses themselves never had any such doubts.

They long ago learned that they were in a sense soldiers, that they were under the same kind of discipline—that it is "theirs not to reason why," but to go where duty calls them. They fully appreciated this in becoming members of the Red Cross, and, like the true soldier, each was anxious to be in the midst of the fray, and each considered herself favored in being among the first called.

Telegrams, expressive of eagerness for the work, have been received by the stay-at-homes from the valiant ones who have gone, and even the most skeptical have now come to believe in the usefulness of the expedition and to be proud of a connection with the nurses in any way, whether by ties of blood relationship or professional amity.

A publication, not professional, expresses its admiration and gratitude thus:

"The aspect of the Red Cross ship as it steamed out of the harbor was a peculiarly inspiring, and yet moving and pathetic, sight—inspiring because of the beneficent impulse of the people who had voluntarily fitted out the ship and sent it on its mission of mercy, and pathetic because of the need so loudly crying for help from the other side of the ocean. God bless it and its beneficent errand was the prayer of many hearts. We were glad we could show this token of brotherhood and human sympathy in the dark hour of the nations' life-and-death struggle—one small token of the spirit of Jesus Christ, who came to save and not to destroy men, in an hour when his precepts and example are put to scorn.

"We are thankful there are brave men and women ready to adventure their lives on the battlefield to minister to the dying and to gather up those who might be saved. The profession of the good doctor and the devoted nurse receives special illustration in this hour. It is set apart from all other professions for its saving power, that takes no thought of self, and is commissioned to the whole of humanity."

It is altogether probable that this is but the first expression of sympathy the American people will feel called on to offer the warring nations. There are yet to be met and combated the dreadful ravages of pestilence almost sure to follow in the train of war. May we be found ready and willing in our contributions, whether of services as Red Cross nurses, or of services at home which permit the country to spare those who go, or of our means which aid in furthering the cause.

Efforts are being made among nurses to collect something substantial for the Red Cross work, and one association is known to be active in its preparations for doing so. Surely every man, woman and child may be a force to assist in allaying the pain of this disastrous war. It may be by actual service as a Red Cross worker, it may be by contributions of money from the fullness of great fortunes, it may be by gifts from more modest means, and it may be by simple influence on those who have not yet given the matter much thought.

It is now the privilege of the American people to make a concentrated effort for healing and consolation by strengthening in any and every way the hands of the Red Cross.

American Red Cross Nurses.

Feelings of pride were mingled with grief by all stay-at-home nurses who bade adieu to their sister nurses sailing on the Red Cross ship Hamburg from Brooklyn, September 13—pride in the splendidly organized and equipped corps of physicians and nurses who sailed away to carry succor alike to the sick and injured, for the success of whose cause there is a secret hope and an underlying and unexpressed sympathy, as well as to the sick and injured from the ranks of those accounted their enemies. It has been said that "greater love hath no man than this," etc., and there could be no clearer application of the truth than that being made by these 150 Red Cross nurses in their perilous undertaking.

Our grief is caused by contemplation of their hazard and the events which call for it. They go with the best wishes and hopes and prayers of all who perforce must remain at home for one reason and another. They will be successful, and through their efforts will the nations of the earth witness the sincerity of our country's claim that we care not at all for conquest nor extension of territory, but much for the general welfare of the world.

For years the people of the warring nations have come to our shores, hoping to find here a place of safety from the trials of the home land. For the time being they are detained, and we send help to them. Verily our people are a charitable people.

The nursing service of the American Red Cross is praised in other countries and its prestige spoken of as unique. This is doubtless due to the fact that it is organized on professional lines. Much credit is due its committees who have had in mind only the promotion of the best interests of the organization and have worked hard to accomplish it.

Each applicant to the Red Cross must furnish convincing evidence of her fitness for the service. She must be above reproach as to character and reputation, well trained and physically fit. She is encouraged to show an activity and enterprise for the progress of her profession by having connected herself with one or more organizations of nurses for that purpose. A nurse who can pass these requirements may be admitted wholly upon her merit and without favor.

The European war has stirred the nurses as nothing else has ever done to become members of the Red Cross. During the last few weeks they have been scurrying to increase their eligibility by securing membership in their alumnæ or state associations. Nearly all were held up by the fact that it has been the season of least activity in all such organizations. The moral is simply that "in time of peace we must prepare for war."

In this crisis all cannot sail away in ships or be able to work on the field of battle, but each one of us can contribute something if it be only to assist in places made vacant by those who have gone. Humanity demands that we, as well as they, shall do all in our power to relieve suffering. We are grateful for the opportunity and that we belong to a class of workers who are and must be impartial in our choice of work, that we can care alike for friend or foe and rejoice in the improvement of the one as well as the other.

Death of Miss McIsaac.

Miss Isabel McIsaac, for some years past superintendent of the Army Nurses' Corps, died in Washington September 21st, and was buried at Waterloo, Iowa, her old home. For many years Miss McIsaac was superintendent of the Illinois Training School for Nurses, and she served a term as president of the American Nurses' Association and as interstate secretary. She was one of the best known and beloved nurses in the United States.

QUERIES *and* ANSWERS

Drip Pan for Water Coolers.

To the Editor of THE MODERN HOSPITAL:

Tell me, please, where I can get a drip pan in which to set the water coolers, so the moisture accumulating on the outside of the can and running down on the tables and floors will be caught and directed into the drip pail under the faucet in front, or something like this. I know they must exist, as I have seen them in hotels.

M. S. TYE,
Superintendent Sparks Memorial Hospital, Ft. Smith, Ark.

I do not know where you can get a drip pan such as you want. I have gone to a good deal of trouble to find one for you, but there seems to be nothing on the market. Two houses that I thought would certainly carry them tell me that they have made a number in their machine shops, but only on order of a customer, and they say that what they make is practically this: a round sheet of copper or nickeled copper big enough to take in the cooler and the faucet; a rim 2 inches high is placed around this sheet, crimped at the top to give strength, and crimped on tightly to the sheet, so that it is simply a big pan with a rim 2 inches high, set either on the floor under the cooler or set immediately under the cooler on the stand. You can give an order for such a device to your local tinner, who should make it just as well as, and perhaps a good deal cheaper than, I could have it done for you. I called the attention of two or three large houses to your statement that you have seen these pans in hotels, and they say that they have been made on the customer's order, and there is nothing of the kind made up in stock anywhere.

Discolored Laundry Fabrics.

To the Editor of THE MODERN HOSPITAL:

What causes fabrics to turn gray after having been to the laundry a few times? We seem unable to prevent this in our hospital, and our laundry forewoman says that all hospital white goods do so, which we know is not true; but what can we do about it? A SUPERINTENDENT.

This question was submitted to Mr. C. M. Leary, sales manager of the Troy Laundry Machinery Company, who makes the following reply:

You are right in your suggestion that hot water will set dirt, stains, etc., in goods when first placed in the machine. Water should always be cold or lukewarm, and by lukewarm we mean not over a temperature of 90 to 100° F. Poor rinsing after the goods have been washed leaves the soap in the goods, which eventually causes them to turn gray. Insoluble alkalies should never be used in a laundry, for it is next to impossible to rinse this out of the goods, causing deposits of both alkali and soap. The excessive use of strong and harsh alkalies with soap and improper rinsing, is largely the cause of dark or discolored linen. We give you the following formula for removing these deposits and discoloration:

1. Run lukewarm water in washer to show 6 inches in inside cylinder; run ten minutes; discharge and drain well.

2. Run hot water in washer to show 2 inches in inside cylinder; add two quarts of acetic acid; run twenty minutes; discharge and drain well.

3. Run hot water in washer to show 2 inches in inside cylinder; add 2 to 5 pounds Wyandotte Yellow Hoop, either dry or in solution; turn on the steam and run from thirty to forty minutes, keeping the lid closed; discharge and drain well.

4. Run in the washer hot water to show 6 inches in the inside cylinder; run ten minutes; discharge and drain.

5. Repeat the above rinse.

6. Run in washer hot water to show 2 inches in inside cylinder; dissolve 8 ounces of oxalic acid in a separate pail used for this purpose only; pour this solution in the machine as the cylinder turns toward the operator at the top; turn on the steam and run for twenty minutes; discharge, drain well, and follow with two hot rinses.

7. Blue in the usual way.

Method of Making the House Count.

To the Editor of THE MODERN HOSPITAL:

I would like to ask if you can give me the proper way of taking the daily census of patients in a hospital? I will give you the method we are now using, which is as follows: At midnight the night superintendent takes the census of all the patients in the house at that time. The following morning we add to this number the patients discharged the previous day. This latter number includes all cases which may be admitted and discharged during the same day, as well as all other discharges. The resulting total gives a number, of course, which is greater than the actual number of patients in the hospital at any particular time during the twenty-four hours, but is the true number of patients that have been in the house and treated as house patients within the twenty-four hours. Are we giving our daily census correctly? If not, where is the error?

H. E. BISHOP,
Superintendent Robert Packer Hospital, Sayre, Pa.

According to your description of your method, you are giving yourself a little the best of the house count, and I think you will find that you are taking credit for more patients than are actually passed through the house.

My method has been to take the house count at midnight and not at any other time. The work is done by the night clerk. He has before him the duplicate admission cards for the day and also the discharge cards. The training school usually makes its own house count for purposes of the distribution of patients among the nursing force, and this count is usually handed into the main office the last thing before the day nurses go off duty. This nursing house count is made up by the head nurses in the different divisions, and it is a rather necessary part of the nursing operations of the institution, but for the purposes of the business office it acts as merely a check. Every once in a while some little accident happens to throw the house count off; it may be in the transfer of a patient from one part of the house to another; it may even happen that a patient is rushed into the institution in an emergency and the proper admission cards may not have been made out—the nurses' house count would catch that at once.

In carrying out the technic of the house count it is a part of the night clerk's duty to carry out the policy of the hospital in charging the house count with the proper number of patients. For instance, if a man comes in at 12 o'clock noon and goes out at 12 o'clock the next day, he would not be charged for two days; but, if he is in the house for more than twenty-four hours, he would be charged as a patient for two days. You can see, if we carry out this policy, we arrive at a better understanding of the number of patients that we are caring for than if

you charged the house count with a twenty-four-hour patient for the day on which he came in as well as the day on which he went out.

In the private pavilion of a hospital I think it is only fair to charge a patient for two days if he is in the house for longer than twenty-four hours, because we must, at the end of twenty-four hours, make all of our arrangements to take care of him for another twenty-four hours.

We can charge private patients for fractional days if they are in the hospital less than a week, but we would not charge for fractional days if they are in the hospital a week or longer.

I think the midnight count, without the additional morning count, makes a fairer house count than if we made two counts at different times of the day.

Per Capita Costs in Tuberculosis Hospitals.

To the Editor of THE MODERN HOSPITAL:

Will you kindly give the per capita cost of patients in tuberculosis hospitals? Our board of control thinks our cost of approximately $2 per day is too high, and I am cutting as hard as I can without robbing patients of something they really need. A SUPERINTENDENT.

Figures of per capita cost are wholly worthless unless one can have all the data that affect them. For instance, some sanatoriums have their own milk and eggs and vegetables; some of them accept only incipient or "up" cases, and these do not require so much nursing; some hospitals do not run full, so the per capita is increased; but, most important of all, some sanatoriums are unspeakably inefficient in all their relations to the patient, and are a disgrace to the communities in which they are conducted.

I think your board would be in better business if they questioned the kind of service you are giving, and took the trouble to compare your administration in this respect with other hospitals of the same character. No one can say that you are spending too much without knowing all the facts. You had better get your board to let you visit two or three other hospitals, where you can make a careful analysis. In the meantime, here are a few figures of per capita costs in good hospitals, but I warn you these figures are worthless for the reasons given:

Name of Hospital.	Capacity.	Average.	Cost per day.	Classes of patients.	Cost includes.
Walker State, Minnesota	120	120	$1.81	All stages.	Renewals.
Cincinnati City	350	316	.88	Advanced.	Renewals and repairs.
Rhode Island State	142	135	1.37	Incipient.	Minor repairs.
Washington, D. C., District	120	95	1.41	All stages.	.....
U. S. Naval, Las Animas, Colo	240	180	1.89	All stages.	Does not include officers' pay.
Colony, Ottawa, Ill	100	50	3.20	All stages.	Everything.
National Jewish, Denver	130	112	1.47	All stages.	Renewals and repairs.

Rennet Ferment.

To the Editor of THE MODERN HOSPITAL:

Your article, "What is sterile milk?" is to me, though a layman, as lucid as could be wished. I would appreciate it very greatly if you would reply to my question, "What is rennet ferment?" I purchase for a hospital, and am consequently interested. C. S. CLARK, JR.,

580 St. Nicholas Avenue, New York.

Rennet ferment is a powder made from the rennet of the stomachs of young animals—calves, pigs, and lambs. It is made chiefly by the Armour Company, Chicago, in the department of chemico-physiology, and is sold as chymogen. It has the property of changing milk into a curd. The milk is first boiled and is then allowed to cool down to 120° F. or lower, and the curd is added according to the directions on the bottle. If it is added to milk hotter than 120°, its effect will be lost, because a greater heat than that destroys the fermentative properties of the rennet. Better let the temperature go down until the milk is a little above blood temperature, then add the chymogen, bring the temperature gradually up to about 120°, and hold it there for half an hour to an hour, keeping the milk constantly agitated to prevent the curd from forming in large, thick, indigestible lumps.

Treatment of Cork Carpet.

To the Editor of THE MODERN HOSPITAL:

Would you kindly inform me what would be the best substance to use in polishing a cork flooring that has been used for some considerable time? I think perhaps something ought to be used as a filler before the polishing is done. I will be grateful to you for this information.

HELEN MACMURCHY,

Inspector of Feeble-Minded Department of the Provincial Secretary, Toronto, Ontario.

The problem of old, dusty-looking and checked cork carpet, with the ever-widening crack at the seams, has been met by the writer in the way described below: Close examination demonstrated that it was at the edges and seams that wear first appeared, and also that the cork crumbled away as rapidly as the hemp back became rotten. All back found water-stained from mopping was more or less rotten, and all back unstained by water was perfectly sound, even in carpet many years old and rotted to the extent of 6-inch gap at seams. All of our carpet had lost its finish, much of it checked, and some of it beginning to crumble on the surface even where the back was sound. From the findings it seemed advisable to protect seams and edges from water. The edges of all pieces were trimmed to the sound back, and carefully cut to give as tight seams as possible, and, where the carpet did not entirely cover the floor, hardwood strips 1 inch wide and the thickness of the carpet were nailed at the edge. All seams and cracks between the carpet and the wall or wood strips were then filled with the waterproof cement used to cement battleship linoleum upon a concrete base. Over all seams the brass strips, made especially for this purpose, were then nailed. These produced a distinct improvement in the appearance of the floor, as the pieces had been arranged so as to make the seams symmetrical and regular in the room. The thresholds were finished with a brass molding designed for the purpose and patented by a local firm. This molding has a wedge-shaped wooden strip to be laid on the floor at the edge of the carpet. Then a heavy brass strip, rolled so as to make one edge lie flat on the floor, the other edge to lie flat on the top of the carpet, and to fit the slant of the wooden strip in the middle, was nailed down firmly. Heavy trucks can then be run up onto the carpet without any possibility of wearing or breaking the edge.

To waterproof the carpet and prevent further disintegration of the surface, a thin coat of shellac was applied. This was almost entirely absorbed into the cork, but a second thicker coat made the carpet smooth and glossy. This finish lasts longer on the carpet than a shellac finish on a floor, and occasional renewals will keep up a good appearance and add greatly to the life of the carpet. An oil mop can be used to advantage on the shellaced surface. This is a saving in the cleaning, as nothing except a scrub will make the old cork surface even moderately presentable.

Our odd pieces we cut into blocks two and a half feet square and used them in a kitchen. All seams were cemented and covered with brass strips, and the whole finished with shellac, as described above. The effect of the brass-bound squares was very pleasing, and the cost decidedly less than new linoleum of any grade.

The cost of the patented brass thresholds was 15 cents per foot, cut at the factory to fit and laid. The cost of the brass strips for binding the seams was 7 cents per foot laid. The cost of the oak strips was 1½ cents per foot laid.

The use of shellac on linoleum and probably on cork carpet is nothing new, yet there may be those who do not know how much it can improve both wearing quality and appearance. It is entirely possible that an additional finish with varnish or wax will add to the appearance. We have not experimented further than the use of shellac. It is very likely that the foregoing process could be used to the same advantage on all kinds of cork floor coverings.

A. R. WARNER,
Superintendent Lakeside Hospital, Cleveland.

Raw Food Cost in Schools.

To the Editor of THE MODERN HOSPITAL:

Can you give us some idea of the amount and value of raw food consumed by young people at boarding schools, and something about the character of the foods used in the average girls' or boys' academy? A MATRON.

Lake Forest Academy, at Lake Forest, Ill., is one of the most carefully conducted institutions, at least in the central West. The director of service is a highly trained hospital nurse, steward, and executive officer. His figures of cost ought to carry a good deal of weight. The following is a table that he has transcribed from his books. It should be said that this group of 130 young people were boys ranging from 12 to 18 years of age. Mr. P. W. Behrens, the superintendent, states that in the girls' department the figures of cost are about the same, for, though young women consume less of the substantials, and especially of meats, they consume more salads and desserts, which about evens the cost column:

RAW FOOD FOR 130 PEOPLE FOR ONE MONTH.

Items.	Quantity.	Per person	Total cost per month.
Milk	2026 quarts	15.6 quarts	$ 136.75
Cream	252 quarts	1.9+ quarts	108.00
Butter	319 pounds	2.45 pounds	98.89
Eggs	300 dozen	2.3 dozen	88.20
Meat, fresh	1454 pounds	11.16 pounds	234.84
Meat, salt	453 pounds	3.48 pounds	83.35
Fish and sea food	379 pounds	2.91 pounds	74.70
Flour	1274 pounds[1]	9.8 pounds	36.25
Cereals	....	23c	30.00
Crackers	....	9c	11.50
Molasses, syrups, sugar	....	....	60.00
Coffee and tea	195 pounds	1½ pounds	50.00
Chocolate	....	....	15.00
Fresh fruit	....	....	50.00
Vegetables	....	....	70.00
Potatoes	32 bushels	1 peck	40.00
Canned vegetables	....	....	50.00
Sundries, kitchen and bakeshop	....	....	100.00
Total cost			$1,337.48
Cost of 130 persons per month			$1,337.48
Cost of each person per month			10.29
Cost of each person per meal (11,700 meals)			.11

[1] 16½ barrels.

These figures include only raw food, and take no account of kitchen help, dining room service, or cost of preparing or cooking food. The above items just about double the cost of feeding the group, making the cost per meal, including service, 22 cents.

LETTERS TO THE EDITOR

About Water Bugs and Old Rubber.

To the Editor of THE MODERN HOSPITAL:

Will some of your readers kindly give me a sure and quick method of getting rid of roaches (water bugs) in a hospital of 75 beds? I would also like to ask what disposition can be made of rubber goods (hot water bags, rubber rings, etc.) which have outlived their usefulness? I have been told that there is a sale for the latter, as the rubber can be melted and used again for an inferior class of goods, but so far have not been able to locate a purchaser. ALABAMA.

Care of Linoleum—Dr. Washburn Corrects an Error.

To the Editor of THE MODERN HOSPITAL:

I notice that in your article on the care of battleship linoleum you state that the Massachusetts General Hospital uses spar varnish on its linoleum floors. This is something which we have never done, nor do I personally believe that it would result in a good floor. We have always used our regular floor polish of the following composition (with directions for making):

Paraffine .....18¾ pounds
Yellow wax .....12½ pounds
Turpentine .....50 gallons

Dissolve the wax and paraffine in the turpentine in a jacket kettle. Avoid using open flame. When the solution is cold, add 1 ounce of ammonia water to each pint. The combination makes a total of about sixty-two gallons.

A small quantity of this is spread on the linoleum once a week and rubbed in with a heavy weight, and later, when dry, polished with a flannel.

When the floor is first laid, it is necessary to repeat this polishing frequently until the required finish has been obtained. F. A. WASHBURN,
Administrator Massachusetts General Hospital.

The Gale Hospital at Haverhill, Mass., is being reconstructed to meet the demand for additional room and other increased facilities.

The Sisters of Mercy, the oldest order of nuns in Chicago, recently celebrated in the institutions of which they have charge the sixty-eighth anniversary of their arrival. At Mercy Hospital the celebration was marked by the placing of a tablet to the memory of the late Ferris S. Thompson. Mr. Thompson, whom the sisters never saw, died in France two years ago, leaving the hospital $300,000. The only explanation given by Mr. Thompson in his will was that he desired to remember an institution that had been kind to a friend of his, and it is said that the sisters of Mercy do not yet know who the friend was. The Thompson bequest made possible the erection of a $250,000 training school for nurses, which is now in operation and affiliated with the Northwestern University. Mercy Hospital was founded in 1850. At that time the institution was known as the Illinois General Hospital of the Lakes. Medical students from Rush College did the first nursing, and later the sisters took up the work. The hospital has been closely associated with Chicago history on account of the aid it has rendered at critical times, such as in the days of cholera, during the civil war, and at the time of the great fire. The original group of the Sisters of Mercy went to Chicago from Pittsburgh in caravans, arriving September 24, 1846, and were engaged in teaching for four years.

ASSOCIATED OUT-PATIENT CLINICS OF NEW YORK.

Movement Aiding Hospitals, Through Their Dispensaries, Toward General Recognition as Chief Public Health Centers.

BY OUR NEW YORK CORRESPONDENT.

The commendable educational campaign of the past decade in hygiene and sane living, so thoroughly carried on by national, state, and civic philanthropic associations, aided by health departments, is inevitably leading the general public to look on dispensaries and out-patient departments of our hospitals as the chief health centers of the community. Dispensaries must soon be prepared to not only serve as clearing houses for admission to sanatoriums and hospitals, but as centers for sociological and educational work, and distributing points through which charitable and philanthropic agences may render financial aid to poor patients and their families in dire need.

The organization of the Associated Out-Patient Clinics of the City of New York two years ago to coordinate the work of existing dispensaries and out-patient clinics was in recognition of this trend toward a broader field. In addition to promoting coordination and cooperation of effort, the association includes in its general aims the elimination of unworthy applicants for treatment, and the promotion of not only proper standards of treatment, but also of economy and efficiency in dispensary management. The New York association has now more than forty dispensaries and out-patient departments pledged to conform to its rules and recommendations. Extensive studies and surveys of a general administrative nature were first made under the supervision of the executive committee. Sections corresponding to the various subdivisions of out-patient departments were eventually organized to prepare recommendations for efficient administration. A glance at the recommendations of one of these sections will convince all dealing with the problems involved in the administration of clinics that no effort has been spared in making a thorough analysis.

RECOMMENDATIONS OF THE SECTION ON PEDIATRICS.

The standards for class "A" are as follows :

1. Efficient medical treatment at all seasons of the year, which can be possible only (a) if no more than 6 patients, old and new, per man per hour are admitted, and (b) if arrangements are made for the presence of a physician-in-charge or his first assistant during every clinic hour throughout the entire year.

2. A nurse in attendance during all clinic hours, and a visiting nurse exclusively attached to the clinic. When practicable and possible, the same nurse should combine the two functions.

3. At least two examining rooms and an additional room for teaching where teaching is done at the clinic.

4. An isolation room for contagious disease cases.

5. A competent assistant, preferably paid, present during all clinic hours, one of whose duties should be the segregation and isolation of contagious cases.

6. Proper laboratory facilities for the immediate examination of specimens of blood and urine at the clinic, or at least in the dispensary or hospital building.

7. Proper equipment should consist of (a) proper examining table, (b) proper scales for infants and children weighing up to 100 pounds, (c) measuring instruments, such as calipers, rulers, etc., (d) proper light for nose, ear, throat, and head work, (e) proper desk and chairs, (f) proper ventilation, plumbing, and light, (g) proper surgical instruments, (h) walls and floors easily washed, (i) filing cabinets for history cards, (j) reference blanks for patients referred to other departments of the institution or to other institutions, (k) facilities for x-ray work, (l) printed diet lists and printed hygienic instructions for children over a year.

8. Special room (or special time) for treatment of whoopingcough cases, if such cases are treated.

9. An infant milk station at the clinic or close cooperation with a department of health milk station, arranged in such a way as to be mutually agreeable to the clinic and the department of health.

10. Special provision for vaginitis cases, if they are not taken care of in some other department of the institution.

The standards for class "B" are as follows:

1. Efficient medical treatment at all seasons of the year, which can be possible only (a) if no more than 6 new patients per man per hour are admitted, and (b) if arrangements are made for the presence of a physician-in-charge or his first assistant during every clinic hour throughout the entire year.

2. Space for two separate examinations and an additional room for teaching where teaching is done at the clinic.

3. An isolation room for contagious disease cases.

4. Proper laboratory facilities for the immediate examination of specimens of blood and urine at the clinic, or at least in the dispensary or hospital building.

5. A competent assistant, preferably paid, present during all clinic hours, one of whose duties should be the segregation and isolation of contagious cases.

6. Proper equipment should consist of (a) proper examining table, (b) proper scales for infants and children weighing up to 100 pounds, (c) measuring instruments, such as calipers, rulers, etc., (d) proper light for nose, ear, throat, and head work, (e) proper and plentiful supply of linen, towels, sheets, etc., (f) proper desk and chairs, (g) proper ventilation, plumbing, and light, (h) proper surgical instruments, (i) walls and floors easily washed, (j) filing cabinets for history cards, (k) reference blanks for patients referred to other departments of the institution or to other institutions, (l) printed diet lists and printed hygienic instructions for children over a year.

7. Special provision for treating whoopingcough cases, if such cases are treated.

8. Special provision for vaginitis cases, if they are not taken care of in some other department of the institution.

The standards for class "C" are as follows:

1. Efficient medical treatment at all seasons of the year, which can be possible only (a) if no more than 10 patients, old and new, per man per hour are admitted, and (b) if arrangements are made for the presence of a physician-in-charge or his first assistant during every clinic hour throughout the entire year.

2. A single room, large, airy, and well lighted.

3. An isolation room for contagious diseases.

4. Proper laboratory facilities for the immediate examination of specimens of blood and urine at the clinic, or at least in the dispensary or hospital building.

At Decatur, Ill., friends of the Decatur and Macon County Hospital recently adopted a novel method of raising the funds needed to complete and equip the new building in course of construction for the hospital. A corn carnival, attended by visitors from all parts of the county, as well as by the citizens of Decatur, was being held in the town, and everybody was requested to save 50 cents out of the money he had allowed himself for entertainment and amusements and contribute it to the hospital fund. It was estimated that, in the event the plan was carried out successfully, several thousand dollars would be secured.

NEW YORK'S LOWEST BABY DEATH RATE.

Supervision of Expectant Mothers by the Milk Committee Saved 10 Percent of Infants Under One Month Old.

BY OUR NEW YORK CORRESPONDENT.

New York City is justly proud of demonstrating to the world the possibility of a continued, steady decrease in her infant death rate. Publication of the fact that Greater New York made a reduction last year in the actual number of infant deaths over her low record of 1912, while in Chicago, Philadelphia, Detroit, Cleveland, St. Louis, Baltimore, Pittsburg, Buffalo, New Orleans, and Toledo an actual increase occurred, has stimulated nation-wide interest in her activities and methods of dealing with this perplexing problem.

It is ridiculous to attribute results accomplished to favorable weather conditions, or to the work of any one agency. This truly remarkable culmination has been realized through the combined efforts of all public and private agencies, cooperating and working along lines that focus on the baby and his environment. The New York Milk Committee has been in the foremost rank of these organizations for the past eight years. This committee has been unremitting in its fight for the reduction of infant mortality through improvement of the milk supply, education of mothers, and by stimulating closer cooperation.

The National Commission on Milk Standards has rendered valuable service to the committee in its program for improvement of the milk supply. The work of the commission has been indorsed by the American Public Health Association, American Veterinary Association, and the International Milk Dealers' Association, and the changes brought about in New York City's regulations closely conform to their recommendations.

The Department of Health of New York City has cooperated and received valuable assistance from the milk committtee's investigation of icing of milk in transit, short-measure milk bottles, transfer of milk on street, milk served at school lunches, and hospital milk supply.

The prestige and influence of the New York Milk Committee was demonstrated last February by the cordial response of the governors of the eastern and middle states to their suggestion of a conference to consider improvement of state laws for the control of the milk industry and suppression of bovine tuberculosis. Delegates, representing respectively departments of health and agriculture and the milk industries of their states, met at the Academy of Medicine and approved of practically all the recommendations of the committee. A constructive legislative program, aiming at a more adequate system of state supervision of milk supply, was the result of this conference.

The committee has been represented at all the principal national and international conventions dealing with infant mortality. They keep in close touch with the fifty-five municipal milk stations with a view to widening the scope and increasing efficiency, and by independent visits and reports actively cooperate with the director of the Division of Child Hygiene of the New York Health Department. These municipal milk stations today sell the bottled pasteurized milk in whole form, and the mothers are taught to modify it at home. The old milk stations, some of which still exist, sold, at low price, milk already modified to feeding formula. Weekly clinics are now held at the stations by physicians, and the nurses in charge give instructions to mothers on all matters pertaining to infant care.

The committee has been active in the inauguration of "better baby contests," and prepared, in cooperation with other agencies, a national standard score-card. They strongly advocate the scoring of babies from a health standpoint, and offering prizes for excellence as a valuable means of educating mothers and bringing them in closer touch with infant welfare societies.

Efficiency of the committee's methods of handling problems of infant mortality can best be demonstrated by following a little in detail one line of recent activity. Investigation and analysis of infant mortality reports of the New York Health Department, while proving a steady decrease since 1910 in deaths of babies under one year of age, disclosed the fact that one in every twenty-four born alive in Manhattan failed to attain one month of existence. The failure of infant welfare agencies to reach babies under two months old, the refusal of mothers to enroll them at the milk stations, and the firm belief that this early mortality was largely due to conditions acting on the baby at or before its birth, led the committee to undertake the following experiment:

Work was begun in one upper and four lower East Side, crowded neighborhoods with a staff of six nurses, one supervising nurse and a physician. Expectant mothers were enrolled largely through the municipal milk stations; the nurses listed many by canvassing the districts, and large numbers were referred to the committee's staff through hospitals, social settlements, churches, schools, and charitable organizations. As soon as possible after registration, detailed histories of previous pregnancies and social conditions were obtained. Mothers were visited every ten days, and the nurse began a systematic course of instruction, keeping in mind the particular conditions present in each individual case. This instruction covered diet, regulation of bowels, kidney function, clothing preparation for confinement, baby's outfit, bathing, care of new-born, care of breasts, danger signals of pregnancy, and how to meet emergencies. Abnormal cases were at once referred to the committee's physician, who took immediate steps to meet each special requirement. New districts were opened, nurses added to the field staff, and the extensive study continued until the committee had 2,644 cases on which to base a report. Results showed the still-birth rate among supervised cases 39.8, while for the same period in the Borough of Manhattan it was 47.5 in spite of the well-known fact that 50 to 60 percent of the still-births are not reported. The death rate of babies under one month for Manhattan was 40 per thousand, while the rate among cases receiving prenatal care was 29.9.

The ultimate aim of this demonstration by the committee was accomplished in securing the adoption, by the Health Department, of these practical working methods as an extension of its infant milk station work.

The committee's part in creating the "Babies' Welfare Association," an organization which last year became a well-developed feature in the work for the reduction of infant mortality, is worthy of mention among its most important recent achievements. This association, a federation of ninety organizations, is increasing the general efficiency of infant welfare work in New York City, and affords a means for facilitating direct cooperation of the New York Milk Committee with every other agency in the field.

The new building being erected for the Englewood Hospital, Englewood, N. J., will be three stories high and of Harvard brick, with stone and terra-cotta trimmings. It is to contain a children's ward, a maternity ward, nursery, special operating room, and some private rooms and nurses' rooms, and also the necessary service departments. Liberal provisions are being made for linen closets, and there will be on each floor a dryer for warming and drying the bed clothes. An electric elevator large enough to accommodate a stretcher will be installed.

PAY OF BOSTON HOSPITAL EMPLOYEES.

All Municipal Institutions Increase Salaries from Twenty to Thirty Percent.

A general salary increase has gone into effect in the municipal hospitals of Boston. The list which follows will be interesting for comparison:

Thirty women at the City Hospital, employed as scrubbers, will receive an increase of pay from $5 a week to $30 a month. The table girls, 12 in number, will receive an increase from $14 to $20 a month; the 12 chambermaids, from $15 to $20 a month; the 20 ward-maids from $16 to $20 a month.

In the laundry the supervisor will receive an increase from $1,080 to $1,140 a year; the salary of the head laundress has been increased from $1,050 to $1,150 a year; the general work receives an increase from $7 to $9 a week, and the shaker and elevator man is increased from $7 to $9 a week.

The woman employed as head sorter receives an increase in pay from $25 to $30 a month, the assistant laundress from $35 to $40 a month, 16 body laundry ironers from $22 to $30 a month, six fancy ironers from $22 to $30 a month, two fancy ironers from $25 to $30 a month, three all-around hands from $25 to $30 a month, eight mangle workers from $22 to $30 a month, and four shakers from $20 to $30 a month.

The salary of the superintendent of nurses is increased from $1,200 to $1,500 a year, the first assistant superintendent of nurses from $728 to $840 a year, the second assistant superintendent of nurses from $600 to $720 a year, the night superintendent from $660 to $720 a year, the teacher of the probation nurses from $600 to $720 a year, the assistant matron from $600 to $720 a year, the sterilizing room nurse from $540 to $600 a year, and the three graduate nurses on the floor from $540 to $600 a year.

The six graduate nurses in Wards A, K, L, E, S, and H receive an increased compensation from $540 to $600 a year; the five first-year nurses from $420 to $480 a year; five head nurses in second year from $480 to $540 a year; six third-year nurses from $540 to $600 a year.

In the south department the assistant superintendent of nurses receives an added compensation from $800 to $840 a year; the day superintendent of nurses from $600 to $720 a year; five head nurses from $480 to $540 a year; the night superintendent of nurses from $600 to $660 a year.

At the Haymarket Square Relief Station the matron receives an added salary from $720 to $780 a year; the graduate nurse from $540 to $600 a year.

At the East Boston Relief Station the matron receives an increase from $600 to $660 a year.

At the Convalescent Home the matron receives an increase from $720 to $780 a year; the head nurse receives an increase from $540 to $600 a year.

At the City Hospital, in the south department, the ward supervisor receives an increase from $540 to $600 a year, and the graduate orderlies, some 30 in number, receive an increase from $420 to $540 a year. The laundryman receives an increase from $50 to $55 a month.

In the hospital proper the messenger is increased from $10 to $12 a week; the center orderly from $25 to $30 a month.

At the entrance office the first, second, third, and fourth assistants are increased from $25 to $30 a month. The night orderly of the out-patient department is increased from $35 to $50 a month.

In the south department the night lodge orderly is increased from $25 to $30 a month.

In the hospital proper the secretary is increased from $18 to $19 a week; the head bookkeeper from $17 to $18 a week; the copyist from $15 to $16 a week; the second copyist from $11 to $12 a week; the third copyist from $11 to $12 a week; the fourth copyist from $10 to $12 a week; the fifth copyist from $10 to $11 a week.

The head clerk receives an increase from $14 to $16 a week; the first and second copyists under the clerk, from $10 to $12 to $14 a week; in the pathological laboratory, the stenographer receives an increase from $12 to $14 a week; the pathologic director from $75 a month to $1,000 a year.

In the x-ray department the assistant photographer receives an increase from $15 to $16 a week.

In the hospital proper the electrician receives an increase from $20 to $22 a week; the electrician's helper from $20 to $25 a month; the plumber's helper from $15 to $25 a month; the gardener from $9 to $12 a week.

In the south department the head cook receives an increase from $60 to $65 a month; the baker from $55 to $60 a month; the jobber from $35 to $40 a month.

In the executive assistant's division, hospital proper, the two physicians receive an increase as follows: first assistant from $1,500 to $1,600 a year; second assistant from $1,200 to $1,300 a year.

THE POOR WELL-TO-DO.

American Surgeon Finds English Hospitals for the Poor Only—Wealthy Compelled to Go to Inadequate Nursing Homes.

England's lack of hospitals for people in moderate circumstances is the thing that most impressed the members of the Clinical Congress of Surgeons of North America at the recent meeting in London, according to Dr. Franklin H. Martin, of Chicago, as quoted by the Chicago *Post*. All of London's wonderful hospitals where the visitors went to watch the operations by the great British surgeons are charity hospitals. People who can afford to pay are barred, and must either go to the inadequately equipped nursing homes or be operated on in their residences.

"This method of conducting hospitals amazes us from North America," said Dr. Martin. "Palatial buildings, occupying acres of the most valuable land in the capital of the world are devoted solely to nonpaying patients, excluding from their advantages the patient of moderate means and made prohibitive to patients of wealth.

"This works injustice both ways. With their large endowments, these hospitals can afford the most elaborate equipment of operating rooms and laboratory diagnostic facilities. Yet patients of means are compelled to go to the imperfectly equipped private hospitals or to nursing homes, with their makeshift arrangements. This must in turn have a pauperizing effect on people of small means who enter the hospitals as charity patients when they would gladly pay a small sum.

"The injustice worked on the paying patients may be serious, as nursing and private homes cannot afford expensive apparatus such as the latest x-ray machines and the like."

Dr. Martin has only praise for the British surgeons. He believes them to be fundamentally better equipped for their profession than the American. By this he means preliminary training and the necessity of each English surgeon being a fellow of the Royal College of Surgeons, which standardizes requirements.

"The average English surgeon is more deliberate in the technical performance of his work than the average American or Frenchman," Dr. Martin declared.

HOSPITAL SERVICE ON THE BATTLE FIELD.

Conditions of Modern Warfare Lessen Chances of Seriously Wounded.

Dr. Joseph Colt Bloodgood, of Johns Hopkins Hospital, an authority on the care of the wounded in war, was recently quoted on the subject by the Baltimore *News* as follows:

"In modern war surgery the wounded are divided into approximately two classes—60 percent that are slightly wounded, and the other 40 percent whose injuries are serious. Recent methods have made it possible to save a great majority of the larger class, but unfortunately the other 40 percent have chances of survival that become less and less.

"The first-aid-to-the-wounded dressings now carried by all troops and the field hospitals, that can treat the slightly wounded at once, make it possible to prevent the dreaded infection of wounds, which used to be the principal cause of death. So that the slightly wounded nowadays recover to a very large proportion, and many of them are back in the ranks fighting inside a few days with wounds that formerly would have been mortal.

"Automobile ambulances and new kinds of stretchers, without poles or with poles that are light and join together like a fishing rod, have helped in getting the badly wounded to the field hospitals, but even in the best field hospitals the chances of badly wounded soldiers are slight; they must be transported back to the permanent hospitals to get any real chance of surviving. So that the saving of the seriously wounded soldier today, like most other army problems, resolves itself into a question of transportation. And on this problem European director surgeons have spent much thought and money. The getting of the ablebodied soldier to the front must be conceded to be the most important factor, so that the carrying back of the wounded has been made a secondary consideration.

"Nevertheless much has been done. Trains that have brought fresh troops can now be changed by a special wire-bedding spread above the seats into hospital trains. Automobiles are being used extensively in taking the badly hurt men far from the battle field to permanent hospital centers.

"I recently looked over the hospital ship Sudan, an old transport refitted at the Alberta docks in London. She has wire-mesh cots everywhere, with specially designed feeding trays that can be swung over the sick soldiers. A number of such hospital ships will be of the utmost service in carrying wounded British soldiers back to England.

"The modern rifle is a humane instrument, inasmuch as many bullets nowadays go through the abdomen, arms, legs, and the larger bones, and even the back of the brain, and heal up quickly.

"The greatest thing now desired by modern war surgeons is some way of reducing the horrible effects of the deadly shrapnel, and all war surgeons desire the abolishment of the use of shrapnel, as has been done with explosive bullets."

Dr. Bloodgood made an address on war surgery before the Clinical Congress in London the day preceding Germany's declaration of war on Russia.

A Motor Hospital.

In the Scientific American Supplement, September 19, Walter Bannard furnishes an illustrated article on this latest military vehicle of the French army, an automobile operating room in which surgical operations can be performed at the battle front. The new vehicle, with a 40-horse-power motor capable of developing an average speed of twenty miles per hour, is furnished with all the accessories and the latest improvements of a hospital operating room. Its operating room, being the principal compartment, contains an improved operating table, and wash basin supplied with sterilized water. In front a smaller compartment contains a sterilizing apparatus and the electrical apparatus, which is operated by the motor, whether the vehicle is in motion or at rest. An ingenious arrangement enables the surgeon to locate the bullet accurately by application of the roentgen rays. The operating room contains also a complete trepanning apparatus, operated by a special motor. It carries an apparatus for sterilizing water by ultra-violet rays. The water is drawn from brooks or ponds by an electric pump. A folding tent for the shelter of the patients is attached to each side of the vehicle. By the employment of automobile operating rooms of this sort, prompt operations in perfectly aseptic conditions can now be performed before removal of the patient from the field, a procedure that will probably greatly diminish the mortality in modern warfare.

Hospital Floors.

At a recent meeting of the American Hospital Association "the best flooring material for wards, corridors, administration buildings, and for operating rooms" became the subject of interesting discussion. E. F. Stevens, the Boston hospital architect, has tried nearly everything made. In some hospitals for corridors he used cork-tile, a material that will hardly ever wear out. Its resiliency recommends it as the best thing on the market. It is nonslipping, and has every advantage of a corridor floor. Linoleum, if properly laid, he considers the nearest approach to a perfect floor for wards and private rooms, if made a smooth layer and properly cemented to the base or under surface. There are various ways of treating the under surface. In northern Germany and Scandinavia hospital architects use an under surface called "steinholtz," which is a magnusite preparation of sawdust and magnusite, that gives some resiliency to the floor. In southern Germany the best architects cement the linoleum directly to the concrete base. For several years he has had best results in the use of linoleum, but does not recommend its use where there is moisture, as in sink rooms, toilet rooms, diet kitchens, and kitchens themselves. For such rooms he would suggest some simple material, depending on amount of appropriation. The brown, red, green, or any one color of linoleum is the best floor to use. In Germany the use of a variegated or jasper surface material, that breaks up surface appearance and conceals footprints, seems a commendable feature of the material.

The use of tile for toilets, diet kitchens, and sink rooms is preferable, if circumstances warrant the expense. If not, use terrazzo, which gives good wear and good appearance. For kitchens the red flint tile makes a splendid floor; for operating rooms, a gray flint tile, a material easy to clean, of good appearance, and is nonabsorbent. Magnusite floors are legion, and are known by different names, but are not satisfactory where there is much wear or moisture. The battleship or very thick linoleum is unnecessary in hospital use. Linoleum of half the thickness would probably wear thirty to fifty years in a hospital, and could be replaced at a cost of 30 percent less than ¼-inch battleship linoleum. The discussion revealed that terrazzo floors for corridors had proved very satisfactory.

The call of Dr. Joseph A. Blake, the surgeon in charge of the American hospital corps attending wounded soldiers in Paris hospitals, was answered by seven young surgeons, who sailed on the White Star liner Olympic September 26 for Liverpool. Dr. Blake's appeal was for six surgeons to live and work in American hospitals during the continuance of the war. Those who responded were Dr. A. H. Dugdale, of Omaha, Neb.; Dr. Mercer Blanchard, of Columbus, Ga.; and Drs. Corry, J. P. Hoquet, Benjamin Joblons, and Lester Rogers, of New York. The seventh volunteer, who will remain but six weeks, is Dr. Richard Derby, whose wife was Miss Ethel Roosevelt.

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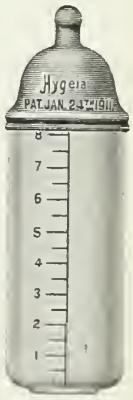

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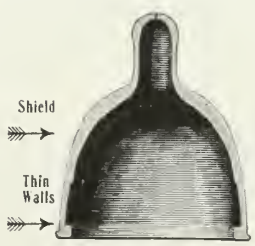

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NEWS *of the* HOSPITALS *and* SANATORIUMS

A 60-bed county hospital is soon to be built at Ventura, Cal.

The new Babies' Hospital at Oakland, Cal., is in operation.

A $40,000 county sanatorium is soon to be built near Spokane, Wash.

The German Hospital, Cleveland, Ohio, is erecting a $35,000 addition.

A new nonsectarian hospital is projected for Southwest Philadelphia or Darby.

Plans are being laid for the establishment of a public hospital in Holland, Mich.

Dr. W. W. Fennell, at Rock Hill, S. C., is building an addition to his infirmary.

A nurses' home to cost $20,000 is being erected at the Rex Hospital, Raleigh, N. C.

Dr. H. Allen is erecting a three-story addition to his sanatorium at Milledgeville, Ga.

A $50,000 hospital is being erected by the Youngstown (Ohio) Sheet and Tube Company.

Worcester, Mass., has recently opened a new hospital for the treatment of tuberculosis.

The Catholics of Pocatello, Idaho, have begun the erection of a $30,000 hospital in that city.

The free clinics of the University of California medical school treated 50,000 patients last year.

The King's Daughters at Ashland, Ky., are planning the erection of a new hospital this fall.

A movement toward the establishment of a public hospital has been launched at Sapulpa, Okla.

The building for the municipal hospital being established at Waukesha, Wis., has been completed.

The medical department of the University of Louisville is now in the seventy-eighth annual session.

A hospital for Indians afflicted with tuberculosis is to be built at Carson City, Nev., by the Government.

The Grand Rapids (Mich.) board of health has authorized the drawing of plans for a new city tuberculosis hospital.

The bungalow plan has been decided on for the hospital for contagious diseases soon to be built at Scranton, Pa.

Work has been begun on the new House of Providence Hospital to be erected on Northampton street, Springfield, Mass.

A building to contain a new heating plant and laundry is being erected for the Red Wing Hospital, Red Wing, Minn.

Buildings involving an outlay of about $48,000 are being erected at the St. Louis County Sanatorium, Nopeming, Minn.

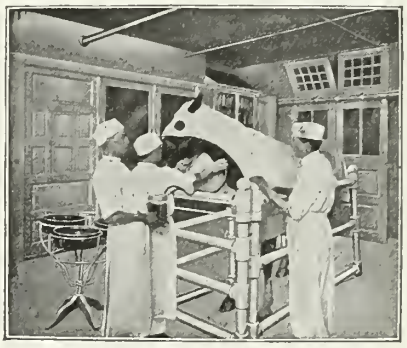
A $14,000 addition to the Physicians' and Surgeons' Hospital at San Antonio, Tex., is in course of construction.

The negroes of Columbus, S. C., are conducting an aggressive campaign for a greater hospital for members of

Treatment and Prophylaxis of Lobar Pneumonia

Recovery from pneumonia depends chiefly upon the formation of antibodies destructive to the pneumococci and capable of neutralizing their toxins.

Antipneumococcic Serum Polyvalent Mulford is the blood serum of horses immunized against different strains of pneumococci that produce corresponding antibodies, and is, therefore, polyvalent. **Used in the early stages of pneumonia** and in sufficient doses, the serum affords valuable aid on account of these specific antibodies.



Bleeding immunized horse in operating room. Care is taken to insure asepsis.

Dosage and Administration.—The minimum therapeutic dose, according to Cole,* must be at least 100 c. c. repeated at intervals of four to six hours in order to secure sufficient concentration of antibodies in the blood of the patient to overcome the infection. Since quick response is desired, the intravenous use of the serum is preferred. In a series of cases recently reported by Cole the total amount of serum administered intravenously ranged from 190 to 460 c. c.; one patient was given a total of 700 c. c.

Antipneumococcic Serum Mulford (polyvalent) is furnished in 20 c. c. aseptic glass syringes and in 50 c. c. ampuls with sterile rubber tube and special needle for intravenous injection.

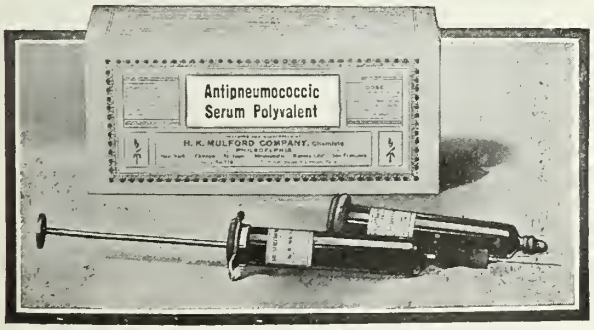
Bacterin and Serobacterin Treatment

The **value of bacterin treatment** in pneumonia is recognized. Like the serum, the bacterin should be polyvalent, and administered at the earliest possible moment. It is frequently employed as an adjunct to serum treatment, stimulating the production of greater amounts of antibodies by the patient.

Time is a vital factor in the treatment of pneumonia. For this reason the advisability of the early use of **Pneumo-Serobacterin Mulford** should be carefully considered; its action is prompt, and larger doses may be given at short intervals, securing quicker immunity.

Prophylactic Immunization Against Pneumonia

A series of "mass" experiments in preventive immunization against pneumonia were recently carried out in South Africa by Sir Almoth E. Wright, in conjunction with Morgan, Colebrook, and Dodgson, upon a large number of native miners having very low resistance against the pneumococcus.



Summarizing their report, the London Lancet says: "It seems difficult to resist the conclusion that the pneumococcus vaccines employed by these observers lessened the incidence and mortality of pneumonia and other conditions produced by the pneumococcus, and among large collections of natives who were highly susceptible to its activity and under conditions favorable to the spread of infection."

Pneumo-Serobacterin Mulford is supplied in packages of 4 graduated syringes, A, B, C, D strength, and in syringes D strength separately.

*Rufus Cole, M. D., New York, 1913. Jour. A. M. A., lxi, No. 9, p. 663.

H. K. MULFORD COMPANY, Philadelphia, U. S. A.

Manufacturing and Biological Chemists

New York Chicago St. Louis Atlanta Kansas City New Orleans San Francisco Minneapolis
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their race in that city. Many wealthy white people are making contributions.

The state of Wisconsin will soon begin the erection of a $300,000 home for feeble-minded at Union Grove, Racine county.

The hospital of the State Soldiers' Home at Roseburg, Ore., was recently damaged by fire. None of the patients was injured.

Mrs. Rebecca A. Wills, who during the Civil War was a nurse, serving in the hospitals of the North, died in Philadelphia September 25.

Beginning this year, the training schools for nurses in the various state hospitals for the insane in Ohio are to have uniform courses.

Eutaw Place Sanatorium at Baltimore, a private institution owned and conducted by Dr. Howard A. Kelly, is being remodeled and enlarged.

The board of managers of Meany Sanatorium at Taughannock, N. Y., contemplates the erection of an addition to provide space for more beds.

Local physicians have started a movement for a public hospital at Alhambra, Cal. The project has been indorsed by the Chamber of Commerce.

Dr. C. R. Jones, who conducts a private hospital at Lewis, Iowa, contemplates the erection of a twenty-five-room building in the near future.

The Casualty Hospital, Washington, D. C., has opened a training school. This is the first time this institution has offered a course for nurses.

It is expected that the new building in course of construction for the Borgess Hospital at Kalamazoo, Mich., will be completed early in the fall.

The Presbyterian Hospital at Philadelphia is to receive $50,000 from the estate of the late Jane McKee Norris, well known in Philadelphia social circles.

Miss Leta Cooper, a graduate of the Presbyterian Hospital training school, Chicago, is the new superintendent at the Prairie du Chien (Wis.) Sanatorium.

A new $150,000 general hospital seems assured for Butte, Montana. Dr. Earl S. Snyder is the president of the corporation organized to develop the project.

Plans for a $30,000 Catholic hospital at Pocatello, Idaho, have been approved. The Sisters of St. Mary at Salt Lake City are cooperating in the project.

Tentative plans and specifications have been drafted for the erection of an addition to the Deaconess Hospital at Great Falls, Mont., the proposed cost being $75,000.

Funds are being solicited in this country for the Lemaan Zion Hospital in Jerusalem, an institution devoted to combating an eye affliction said to be prevalent in the Orient.

Rosanna M. Nagle, who died a few weeks ago at No. 167 East Sixty-fourth street, New York, left $10,000 to Katherine Breen, described in the will as "my faithful nurse."

Mrs. Henrietta Casper, a Philadelphia charity worker, and the oldest member of the board of directors of the Jewish Maternity Hospital of that city, is dead at the age of 66 years.

The Allentown (Pa.) Hospital has opened a roof garden, designed for the care of tubercular and pneumonia cases, and for cases of typhoid that require open-air treatment.

The hospital being built at Dell Rapids, S. D., by Drs. Grove, Eagan and Grove is to have accommodations for 35 patients. It will be three stories high, fireproof, and will cost about $22,000.

Crossed wires in an electric switchboard at the Eastern Maine Hospital for the insane at Bangor recently started a fire which resulted in damage to the building amounting to about $5,000.

A monument is to be erected in the Canal Zone, at a cost of $30,000, to commemorate the labors of Dr. Walter Reed and his fellows, who made the construction of the

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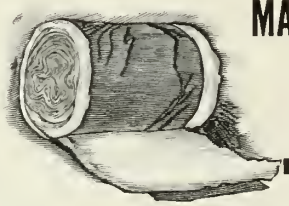

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canal possible by their labors in sanitation. A special day will be observed at the Panama Exposition in San Francisco next year in honor of these men.

It is reported from Colorado Springs, Colo., that the trustees of the Union Printers' Home in that city contemplate the erection of a $125,000 hospital building at the home in the near future.

Dr. S. W. Pryor, who conducts the Magdalene Hospital at Chester, S. C., contemplates enlarging the institution. Among other improvements will be the installation of a modern x-ray department.

"Maplewood Infirmary" will be the name of a private institution to be established in Glasgow, Ky. Drs. R. H. Porter, C. C. Howard, E. T. Ellison, and Mr. E. P. Barlow are interested in the project.

Miss Mary A. Jamieson, for the last five years superintendent of the Springfield (Ohio) City Hospital, has resigned to accept the position of superintendent of the Grant Hospital at Columbus, Ohio.

According to a report given out early in October, it was expected that the new $250,000 building of the West Jersey Homeopathic Hospital at Camden, N. J., would be opened some time during the month.

Miss Jeanette S. Lyon, for the last four years superintendent of the Provident Hospital and Training School, Chicago, has accepted a position as directress of nurses in the Evanston Hospital, Evanston, Ill.

The Woodstock (Ill.) Public Hospital Association has leased a fine, large residence, and is remodeling it to provide a new home for the Woodstock Hospital, with increased capacity and better facilities generally.

Work has been started on the new reception building and nurses' home of the State Homeopathic Hospital at Rittersville, Pa., two of the five buildings to be erected out of the recent legislative appropriation of $93,000.

There are 173 charitable organizations on the list indorsed by the Chicago Association of Commerce, which undertakes to protect the public against unworthy agencies and to see that contributions made are well spent.

The Women's Southern Homeopathic Hospital, Philadelphia, held its commencement exercises October 8, graduating seven nurses. The address was delivered by Dr. H. L. Northrop. Miss L. U. Stokes is the superintendent.

Miss Elizabeth McGregor, formerly a teacher in the public schools of St. Paul, Minn., has recently taken charge of the Hospital for Crippled and Deformed Children in that city. Miss McGregor spent the summer in Europe.

Ninety-five percent of the patients received in the detention wards of the Minnesota state hospitals for the insane are released, only 5 percent being committed as permanent inmates, according to a bulletin of the state board of control.

On account of failing health, Rev. Ward Bucher Pickard, for several years superintendent of St. Luke's Hospital at Cleveland, Ohio, was placed on the retired list by the Northwest Ohio Methodist conference held at Norwalk a month ago.

On the site of the new Illinois State Hospital near Alton, where twenty-seven buildings have been staked off, the rich top soil is being removed and piled up to be spread over the ground after the construction work has been completed.

A building 40x80 feet and three stories high is being constructed for the Englewood Hospital, Englewood, N. J. Brick and hollow tile are being used throughout. The new structure will contain a maternity ward, a nursery, and some private rooms.

Miss Mary R. Swann, head nurse at the Lincoln (Neb.) State Hospital, has been appointed president of the Nebraska state board of nurses. Miss Swann was formerly employed in the Government hospital for the insane at Washington, D. C.

Stock amounting to several million dollars was lost by various charitable and philanthropic institutions through the collapse of the big Claflin store corporation. The Rockefeller Foundation held 451 shares. A number of

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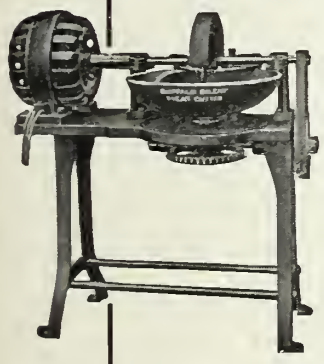

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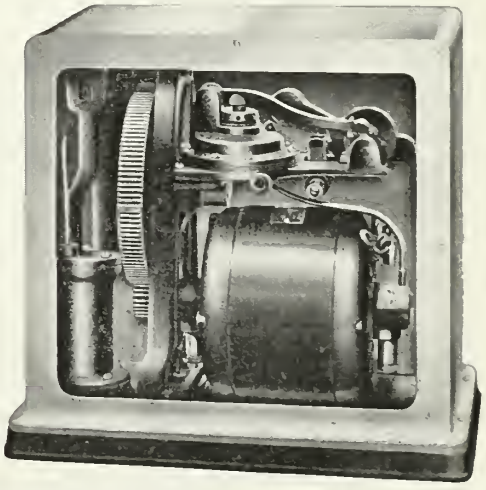

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the charities of Salem, Mass., were losers. One hundred shares belonging to the Salem Hospital were wiped out.

St. Elizabeth Hospital at Covington, Ky., and the Huber Memorial Hospital at Pana, Ill., were struck by lightning recently. Both are new buildings. Considerable damage was done at the Pana hospital, but owing to the fireproof construction, no fire resulted at either institution.

According to the Altoona (Pa.) *Times* it is probable that a site near Altoona may be selected for a large sanatorium which two New York physicians and a number of eastern capitalists intend to establish in that section of the country for the treatment of tuberculosis.

The Navy Department will expend $40,000 in providing temporary buildings at the navy hospitals at Mare Island, Cal., and Puget Sound, Wash., in order to care for the sick of the Atlantic fleet and of the warships of foreign nations at the Panama-Pacific Exposition next year.

Miss Margaret J. Barr, a graduate of St. Luke's Hospital, Kansas City, also a graduate of the Pennsylvania Orthopedic Institute and School of Mechano-Therapy, Philadelphia, has been engaged to teach massage to the nurses in training at Christ's Hospital, Topeka, Kan.

According to reports to the United States Public Health Service, leprosy in epidemic form has broken out in Mexico. In Mazatlan alone 150 cases have been reported. Public health officials assert that under existing laws they are powerless to institute a quarantine.

Two temporarily demented patients have lost their lives at Cleveland (Ohio) City Hospital recently by jumping from windows. As a result, steps are being taken toward placing screens or other safety devices on all of the hospital windows.

The new building recently completed by The Dalles Hospital Association at The Dalles, Oregon, has accommodation for 20 patients in addition to living quarters for nurses. Special attention has been given to equipping the operating room with the view of making it as complete and up-to-date as possible.

The Presbyterian Hospital at Charlotte, N. C., issues a periodical bulletin, giving reports of the work done by the institution and containing a number of carefully prepared papers by staff members on subjects of professional interest. The bulletin is edited by Dr. James R. Alexander.

The burning by interns in the Charity Hospital at New Orleans of some of the blood-stained clothing of a murdered policeman, which was desired by the prosecution as evidence, has resulted in an order from the superintendent to the effect that all garments in homicide cases must be preserved.

Among the conveniences of the new Eitel Hospital at Minneapolis, said to be one of the largest, best arranged, and best equipped privately operated institutions in the United States, are small handy kitchenettes on each of the five floors, where nurses may prepare special diets without making the trip to the main kitchen in the basement.

The Iowa State Hospital at Clarinda has been fighting a typhoid epidemic, but at last reports the disease was under control. Out of 53 cases there were five deaths. One of the patients who did not recover was the chief engineer of the hospital, who had been in the employ of the state for over twenty years.

It is estimated that 10,000 people attended the laying of the corner stone of the new St. John's Hospital at Cleveland, Ohio, the erection of which, it was announced, has been made possible by contributions from poor people, including seamen, stevedores, working girls, and laborers. The cost will be more than $100,000.

The Flower Hospital, Toledo, Ohio, owned and operated by the West Ohio Conference of the Methodist Episcopal Church, will launch on November 16th a ten-day compaign to raise $150,000 for a new building, equipment, and heating plant. The sum mentioned will, it is said, enable the hospital to double its present capacity of 50 beds.

A North Carolina court has decided that a hospital cannot hold a patient against the patient's will. The plaintiff in the action referred to contended that she was kept at the hospital, a private one, against her will, and that she was treated in such a manner as to cause her condition

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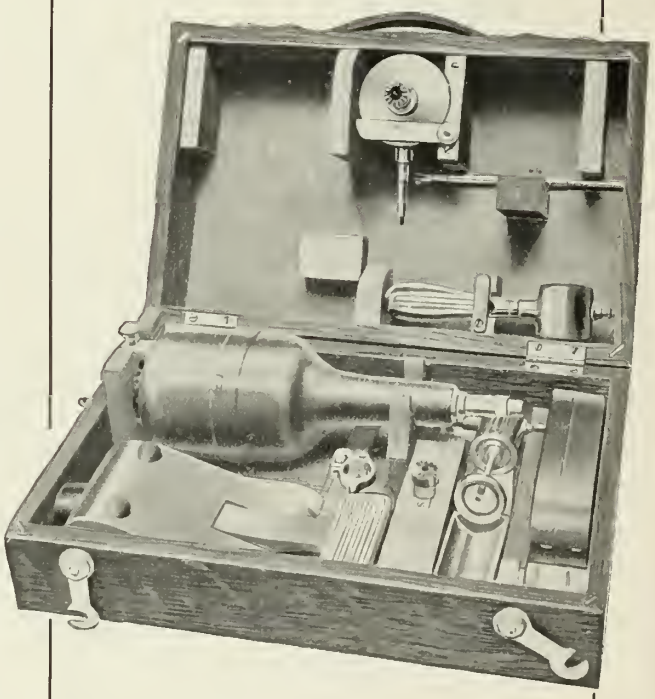
After the method of Dr. Fred H. Albee

is mending with nature's own materials.



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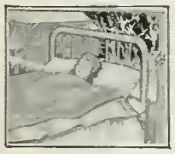

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to become worse rather than better. The defendant claimed that the patient had received careful treatment, and that at the time she asked to be discharged she was in no condition to leave the hospital. The case will probably go to the Supreme Court.

Steps are being taken toward the establishment in Montgomery County, Md., of a county tuberculosis hospital, for which the last state Legislature appropriated $5,000 on the condition that $10,000 be raised by the county. The law provides also for an annual maintenance appropriation of one-third of the required amount.

The Long Island College Hospital, Brooklyn, is seeking to raise a fund of $2,000,000 for the further development of the institution. This hospital now cares for an average of over 300 cases a day, for 70 percent of which, it is asserted, no pay is received. According to the plans of the trustees, half of the expected donation would be expended on the medical school.

Miss Josephine Thurlow, superintendent of the Saginaw (Mich.) General Hospital, has accepted an appointment to manage the Burbank Hospital at Fitchburg, Mass. Miss Thurlow is a graduate of the Massachusetts General Hospital in Boston. She was superintendent of the hospital at Corning, N. Y., for three years and of the New York Lying-in Hospital for an equal length of time.

A new institution known as the Theodore Presser Home for Retired Music Teachers has been opened in Germantown, Pa. There are accommodations for sixty-five guests, and a hundred can be cared for when all the space is utilized. Music teachers of either sex of the age of sixty-five years or more are eligible for admission. The buildings, ground, and equipment of the home cost $200,000.

Dr. Harold E. Robinson, acting head of the department of bacteriology at the University of Minnesota, is another American physician "bottled up" in the European war zone. Dr. Robertson was doing research work in Germany when the medical men of the hospital were called out, and is now bacteriologist at the Vickerschein Hospital in Berlin.

The physical encounters required in the production of "The Third Party" at the Shubert Theater in New York are said to have been so strenuous that the actors found it necessary to ask the management to install an emergency hospital on the stage. Accordingly a first-aid kit was procured and a young physician employed for the rest of the engagement.

The hospital being established at Elizabeth City, N. C., is to have a modern x-ray equipment as a memorial to the highly esteemed qualities of Dr. William J. Lumsden, a veteran physician and surgeon, who has been compelled to give up practice as a result of injuries received in a fall two years ago. The funds for the purchase of the outfit are being raised by popular subscription.

Ladies interested in St. Francis Hospital, Poughkeepsie, N. Y., have taken up the matter of utilizing waste products on the farms of the county for the benefit of the hospital. The farmers have been asked to notify the hospital of any fruits, vegetables, etc., that they cannot use, and arrangements have been made to gather these products and to ship such of them as are not needed by the hospital or cannot be disposed of locally.

The lecture bureau of the Department of Education of New York City is giving an interesting course of travel lectures at the Otisville Tuberculosis Sanatorium, outside of New York City. The Bulletin of the New York Health Department for October 3 makes a note to the effect that the lectures are proving of great interest to the patients, and that new ways of entertaining the sick at Otisville are in contemplation.

Bids have been asked by the State Homeopathic Hospital for the Insane at Allentown, Pa., on five new buildings, and also on an aerial tramway for carrying coal from the railroad to the hospital power house. The new buildings will comprise a reception building, a building in which improved methods of treating patients will be experimented with, a building for tubercular patients, an isolation cottage, and a home for male nurses.

Dr. R. E. Cloward, F. F. Fisk, and E. C. Chamberlain have announced their intention to build a hospital at Price, Utah.

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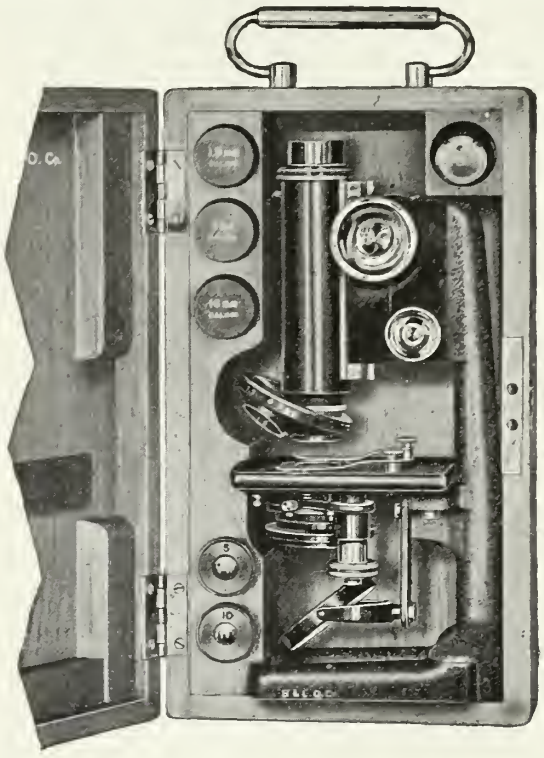

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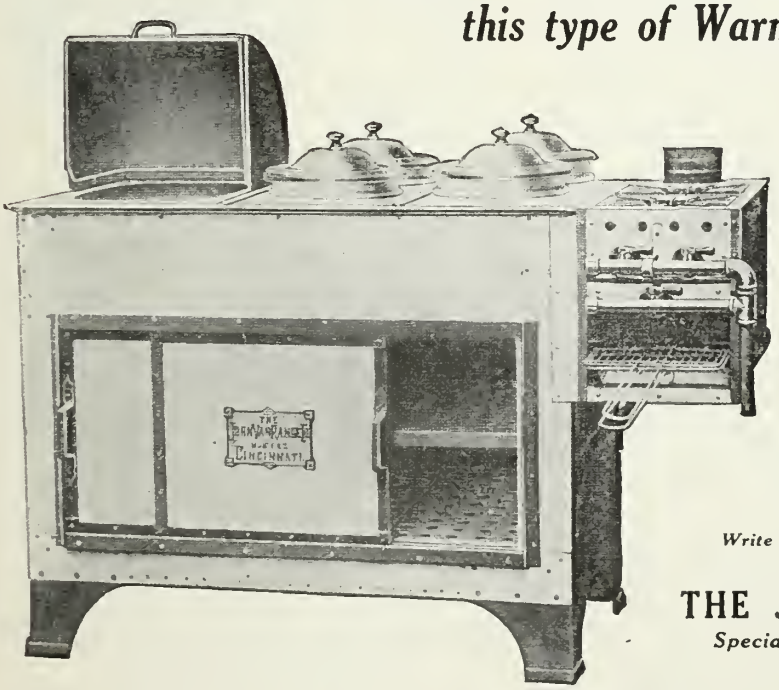

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In a recent bulletin the Mississippi state board of health announces that pellagra, a disease which has lately become very common in the South, resulting in an alarming death toll and presenting a perplexing problem for the medical profession, is not an infectious disease, as generally supposed, but that it is due to improper feeding or a one-sided ration. The announcement is based on the research work of Dr. Jos. Goldberger.

The establishment of sanatoriums and homes for sick and aged members was one of the questions brought before the convention of the United Brotherhood of Carpenters and Joiners of America held in Indianapolis recently. It is proposed to build one home and one sanatorium east of the Mississippi river and one home and one sanatorium in the West, the latter to be located at a place suitable for the treatment of tuberculosis.

A movement is under way at Everett, Wash., for the establishment of a county tuberculosis hospital. The tubercular patients of the county are now cared for at a sanatorium in an adjoining county at an expense of $50 a month each. Counties in Washington providing proper facilities for the care of their patients are allowed $3 a week for each patient by the state, and it is thought that this will almost cover the cost of maintenance after suitable buildings have been erected and equipped.

Up to October 1, the National Red Cross Society had spent approximately $286,000 in preparation for its services in the European war. The outfitting and transportation of the 172 nurses and surgeons of the relief expedition, together with salaries and subsistence for six months, amounted to $200,000. Forty thousand dollars went for hospital supplies, and an equal sum was used to make up special funds sent to European Red Cross societies and for other purposes named in the report.

The negroes of San Antonio, Tex., recently gave a concert, which in two performances netted over $1,000 toward the proposed negro hospital in that city. The program included grand opera, religious arias, and negro folk songs. One hundred voices were in the chorus, which had been trained for weeks. Seats were reserved for the whites, who attended in large numbers. It was the first time that grand opera had been attempted by the negroes in San Antonio, and the affair was a decided success.

Reports come from all parts of the country telling of a shortage of drugs and other hospital supplies affected by the European war and the high prices asked for such as may be obtained. Physicians are being asked to help the hospitals by prescribing the rarer drugs as little as possible. It is hoped that the American chemists will be equal to the occasion and their opportunity by producing supplies that will be equal in quality to those of which the Germans in particular have had a monopoly.

The South Baltimore (Md.) Eye, Ear, Nose, and Throat Charity Hospital is not to await gratuitous offerings for the funds necessary to complete the new building it has in course of construction. Instead, it is putting on the market a $50,000 issue of ten-year, first mortgage gold bonds, bearing 6 percent interest. It is expected that the new building will greatly increase the earning power of the institution, as it will provide twenty rooms for pay patients, and it is believed that these private rooms will yield more than enough to cover the interest on the bonds.

Dr. Theodore C. Janeway has taken up his new work as professor of medicine at the Johns Hopkins Hospital, succeeding Dr. L. F. Barker. Dr. Janeway was appointed to the important post at Hopkins last spring, following Dr. Barker's announcement that the terms of the Welch endowment made it impossible to continue as professor of medicine. Dr. Janeway was formerly Bard professor of medicine in Columbia University and director of the medical department of the Presbyterian Hospital of New York.

Dr. W. N. Keller, of Tacoma, Wash., has been appointed superintendent of the Eastern Washington State Hospital for the Insane at Steilacoom, succeeding Dr. A. P. Calhoun, resigned. There has been a change also at the Medical Lake (Wash.) state hospital, where Dr. A. S. Oliver, Jr., has been made superintendent. The superintendency of the Medical Lake institution has been vacant since Dr. J. M. Semple resigned several months ago. Dr. Oliver was the assistant superintendent, and assumed charge awaiting the action of the board of control.

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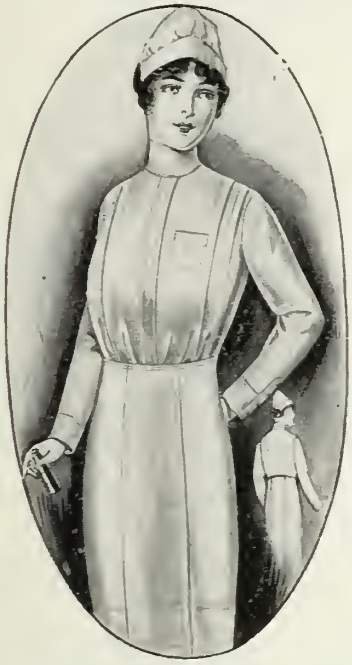

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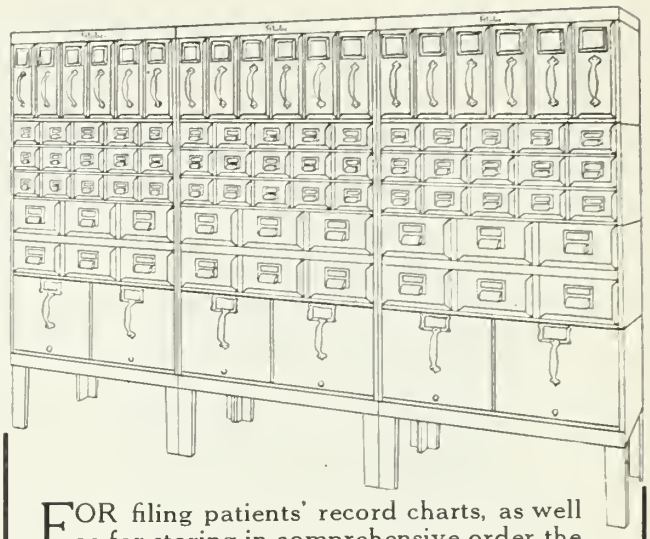

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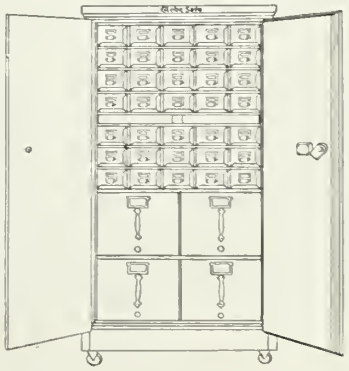

HOPKINS CELEBRATES SILVER ANNIVERSARY.

The Reunion of Alumnæ and Associated Workers Proves a Big Success.

Nearly 500 physicians and nurses, alumnæ of the Johns Hopkins Medical School and training school of the Johns Hopkins Hospital, attended the celebration of the twenty-first anniversary of the medical school and the twenty-fifth anniversary of the hospital and training school, held in Baltimore October 5, 6, 7, and 8.

The program for this celebration was announced in the October number of THE MODERN HOSPITAL. It was carried out with the exception of the participation of Sir William Osler, whose war duties in England prevented his attendance. At the opening Dr. Welch talked about what the old Hopkins had accomplished, and mentioned some of the things he hoped the institution would do in the future, telling a number of incidents of the old life at the medical school and reciting reminiscences of his associates. Dr. Goodnow, in his talk, dwelt on the sagacity and foresight of the men who, years before the opening of the hospital, laid the foundation for the important work now being accomplished, and paid tribute to those who have put into execution the plans then adopted. He urged continued liberal support of the hospital and the medical school in order that they may enlarge their sphere of usefulness and even surpass past achievements. Dr. Henry M. Hurd traced the history and development of the hospital, and praised the efforts of those who have been responsible for important discoveries or improved methods.

Dr. Winford H. Smith, in his address, gave some interesting statistics regarding the growth of the hospital. He said in part:

"The Johns Hopkins Hospital, when opened twenty-five years ago, provided accommodations for some 250 patients. The bed capacity was soon increased to 362, and for many years, in fact until two years ago, the capacity remained at 362. Although this would not seem to indicate a very rapid growth, nevertheless there has been a continuous, steady growth in activities—a constant broadening of the field of work.

"During the last two years both the scope of the work and the size of the plant have been markedly increased. The Harriet Lane Home for Invalid Children, while at present operating to only one-third its capacity because of insufficient funds, provides accommodation for 100 children needing medical treatment. The Henry Phipps Psychiatric Building, complete in every detail, with its wards, laboratories, class rooms, gymnasiums and recreation rooms, added 88 beds. The Charles L. Marburg Memorial Building, containing 56 private rooms and a large and beautiful dining hall for the hospital staff, while increasing the capacity only 15, did more by furnishing infinitely better accommodations and by releasing old Ward B to be used as an annex to the nurses' home for the accommodation of 75 nurses. The James Buchanan Brady Urological Institute, soon to be occupied, adds 60 beds and provides research laboratories, examination rooms, and extends the facilities of the dispensary. Furthermore, it is the first clinic of its kind in America."

Miss Adelaide Nutting, formerly superintendent of the training school, discussed the organization and work of that institution.

The various clinics and scientific programs drew a large attendance. Doubtless the paper of the greatest popular interest was that read by Dr. Simon Flexner, of the Rockefeller Institute, announcing his success in isolating the germ of infantile paralysis. Dr. Richard Strong, who has seen extensive service in the Philippines and is now professor of tropical diseases at Yale, pointed out that the Panama Canal, in bringing new trade to this country, is likely to bring new diseases also. The three Herter lec-

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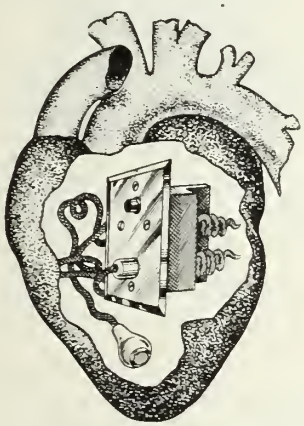

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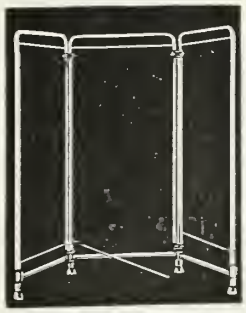

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tures on the heart were delivered by Dr. Thomas Lewis, of London.

Dr. Charles P. Emerson's lecture on "Mental Reaction in Diseases" was much enjoyed. Dr. Emerson maintained that many disorders of the human system are the result of overwork, showing by numerous illustrations how certain diseases could have been prevented by recreation and rest before the weary system began to relax and thus invite disease. He advised that care should be taken in diagnosing a case in order to avoid mistaking as a symptom of a disease what is in fact only nature's effort to ward off the disease.

At the luncheon given in honor of James Buchanan Brady, the New York multimillionaire who gave to the Johns Hopkins Hospital the $250,000 building, now nearly completed, known as the James Buchanan Brady Urological Institute, Mr. Brady announced that he was so well pleased with the building and the prospects of its usefulness that he had drawn up a new will in which he provided a considerable sum for maintenance and improvements.

At the dinner of the alumnæ of the Nurses' Training School, at which Miss Grace O'Brien presided, Miss Amy Miller responded to the toast, "The First Class," comparing the conditions and methods at the beginning of the school with those of the present, and telling what some of the graduates had accomplished. There were other toasts and responses as follows: "The Medical School," Mrs. Helen Wilmer Athey; "The Red Cross of All Nations," Miss Mary Cloud Bean; "New Fields," Miss Wilson; "Forward," Mrs. Isabelle Stevens Hunner. Mrs. Clara D. Noyes reviewed the progress of the training school since its foundation.

A coincidence of the celebration is the fact that after twenty-five years all of the men who were then heads of the various departments are still living, and all took part in the affair, with the single exception of Dr. Osler, who sent a letter, which was publicly read by one of his former associates.

One of the purposes of the event was to bring together classmates and associates of other days for the enjoyment of a social reunion, and this seems to have succeeded admirably.

The following is the statement of ownership, management, circulation, etc., required by the act of August 24, 1912, of THE MODERN HOSPITAL, published monthly at St. Louis, Mo., for October 1, 1914: Editor, Dr. John A. Hornsby, Chicago, Ill., and associates as per list attached; managing editor, ——; business manager, Dr. Otho F. Ball, St. Louis, Mo.; publisher, The Modern Hospital Publishing Company, St. Louis, Mo.; owners, The Modern Hospital Publishing Company, St. Louis, Mo. Stockholders holding 1 percent or more of the total amount of stock: Dr. John A. Hornsby, Chicago, Ill.; Dr. Otho F. Ball, St. Louis, Mo.; Judge Irvin V. Barth, St. Louis, Mo.; E. M. Hornsby, Chicago, Ill.; L. M. Ball, St. Louis, Mo. Bondholders: there are no bondholders. (Signed) Otho F. Ball, President The Modern Hospital Publishing Company. Sworn to and subscribed before me this seventeenth day of September, 1914. (Seal) Anna H. Pfeifer, notary public. My commission expires November 26, 1915.

The news comes from Philadelphia that recently there has been a dearth of applicants for positions filled through the city civil service examinations. Only one physician had applied for the superintendency of the Philadelphia Hospital for Contagious Diseases at the time the examination was scheduled to be held, the last week in September. The minimum number of applicants for any civil service position is four. The position pays $3,000 a year. Other examinations which had to be postponed because of a lack of applicants were those of operator in the roentgen ray laboratory, paying $1,000 a year; assistant in the pathological and bacteriological laboratory, paying $720 a year; and head nurse, paying $600 a year.

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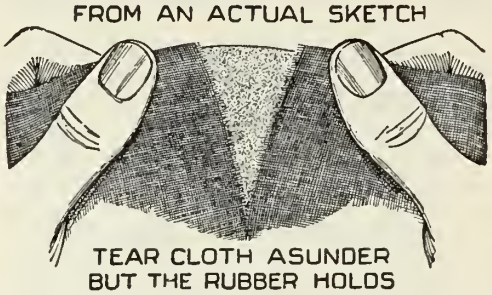

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, ana Aaministration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. III *December, 1914* No. 6

THE RELATIONSHIP OF POVERTY AND SICKNESS AND OF BOTH TO THE HOSPITAL.

Money Is Wasted That Cures a Man Only to Let Poverty Induce Illness Again—A Large Percentage of Sickness Among the Poor Traceable to Their Poverty—Duty of the Hospital to Point Out the Real Cause of Sickness, So That Society May Remove It.

By STEWART M. JOHNSON,

SECRETARY OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET, LONDON.

IT is not the object of this paper to discuss which of the two, poverty or sickness, is the cause of the other. There is no difficulty in finding evidence in abundance to prove either that much poverty is caused by sickness, or the other way about, that much sickness is caused by poverty. It is generally agreed that the two causes interact mutually, and compose a vicious circle. But if it is a matter of debate which of the two comes first in the cycle, there can be little doubt which comes last, and that is sickness. The series may be written—

Poverty: Sickness,
or
Sickness: Poverty, Sickness.

In each case the terminal is the same. Death, or, in other words, sickness successful, is rarely due to poverty uncomplicated by sickness. Deaths from starvation, from poverty pure and simple, are all but unknown in civilized countries.

The experience of "fasting men" has shown that, with suitable precautions, the human body can lose almost half its weight without fatal result or great discomfort. In the rough and tumble of the world, however, long before so large a proportion of wasting has taken place, the subject, enfeebled by privation, falls a prey to disease. The first attack may be repulsed, but the assaults are repeated until the patient succumbs. It is well known that the death rate among the poor is higher than among the rich, and that a high death rate is accompanied by a high rate of sickness which does not immediately end in death.

Now, the spectacle of sickness combined with poverty customarily excites the commiseration of the well-to-do. Poverty unattended by sickness, be it remarked, has frequently the reverse of this effect. Witness the barbaric penalties enacted against the "sturdy vagrants" of the Elizabethan age, and the harsh treatment of able-bodied paupers in comparatively recent times. But sickness and poverty together touch the heart of the comfortably-off. That selfishness transcending self which urges man to treat his neighbor as himself impels the better-off to provide for the less fortunate all the machinery for the treatment of sickness—doctors, hospitals, dispensaries. This machinery, whether charitable in the sense that it is the product of voluntary effort, or only so in the secondary sense that its support by taxation is unresisted, is constructed in the spirit of charity—the spirit, namely, that bids man do unto others as he would they should do unto him. When the rich man is sick, he sends for a doctor, takes to his bed, or perhaps goes into a nursing home. When the poor man is ill, the rich man supplies him accordingly with a doctor and a hospital ward or out-patient department.

But, whereas the rich man leaves the consulting room or the nursing home free to follow the advice given him, and with a reasonable prospect of remaining in the health he has been enabled to

regain, the poor man is discharged cured, or relieved, it may be, in the majority of cases, of his particular complaint for the time being; but so far as concerns his poverty, the primary or secondary cause of his illness is in the same state as when he came in. His poverty, unrelieved, is bound to bring sickness in its train again, and again and again until at last death, the consummation of sickness, is achieved. When this event happens, all the money spent on his medical treatment is lost—not merely, be it remarked, the expenditure on his final fatal illness, but all as well that has been expended, with temporary success, on his previous illnesses. For example, a poor man may be relieved of appendicitis by the removal of his appendix; he may be operated on for rupture and be enabled to resume a life of toil; vaccination may preserve him from smallpox, antitoxin may rescue him from diphtheria; he may be successfully nursed through pneumonia or an attack of acute rheumatism, only to die a year or two later of consumption. Then not only is the money laid out on the treatment of his phthisis wasted, but also all that has previously been paid for attendance on his earlier maladies. It is manifest, therefore, that the treatment of sickness in the poor requires something in addition to the medical attendance which the rich man, anxious to do unto others as he would they should do unto him, provides on his primal impulse. Hospital authorities have in recent years awakened to this truth, and almoners and social service departments have been instituted to cooperate with other agencies for the prevention or alleviation of poverty, so that the medical treatment shall not be handicapped by social disabilities other than sickness.

The usefulness of the social service department to the hospital is beyond doubt. There can be no question that it does much to break the vicious circle by which sickness and poverty each drag the other in train. It provides convalescence or instruments for the discharged patient; it looks after the children while the mother is in hospital; it supports the family of the early consumptive while he is in a sanatorium; it procures work for the unemployed, it restores self-respect to the downtrodden and prudence to the thriftless; in short, it mitigates the evils incident to sickness and poverty in countless different ways. The social service department has at last, after a struggle against blindness and indifference, won for itself so secure a position in the estimation of hospital authorities that the danger now is lest it should be supposed that the problem of the interaction of sickness and poverty on one another has been solved and that there is nothing further to be done. The fact has been allowed to slip out of sight that, unless the efforts of the social service department are sufficient to place the patient permanently above the poverty line, the money it expends on him is just as much lost in the long run as the cost of the medical treatment. So long as the breadwinner is not enabled to earn a wage sufficient to supply himself and his dependents with adequate diet, house room, warmth, and clothing, then the money spent on convalescence, on the hire of the deputy mother, on the maintenance of the consumptive's household, in finding employment for the workless, even the time occupied in encouraging the downhearted or reproving the improvident, is thrown after the money laid out on the removal of the appendix, the radical cure of hernia, the injection of vaccines or sera, the skilled nursing for persons whose lives are fated to be lost prematurely by illness induced by poverty. Were the numbers that answer to this description attending hospitals insignificant, nothing further need be said, but there is reason to believe that in London, at any rate, patients of this class form a not small minority. It was estimated by Mr. Charles Booth that during the period 1890 to 1900, in London, one-tenth of the population was in extreme poverty, "in chronic want," and that another two-tenths were in poverty, "living under a struggle to obtain the necessaries of life."

Similarly Mr. Rountree in 1900 found that one-tenth of the population of York was in primary poverty—that is, "their total earnings were insufficient to obtain the minimum necessaries of merely physical efficiency"; and that approximately two-tenths more were in secondary poverty—that is to say, "their total earnings would be sufficient for the maintenance of merely physical efficiency, were it not that some portion of it is absorbed by other expenditure, either useful or wasteful."

From the evidence given before the recent royal commission on the Poor Law and before the King's Hospital Fund Committee of Enquiry it appears probable that two-fifths of the out-patients attending the London hospitals are drawn from that one-tenth of the people who are in extreme or primary poverty, while the remaining three-fifths, with the exception of a not great proportion of better-off "consultation" cases, are in secondary poverty or poverty that is not extreme. It is among this latter class that the social service department can achieve its best results. For those "living under a struggle to obtain the necessaries of life" it can give assistance just in the nick of time; it can intervene on the side of the struggler at a critical moment; it can tide his family over a temporary crisis. It

can advance the loan or provide just the little extra for those "whose earnings would be sufficient, were it not that a portion is absorbed by some useful expenditure," or give help, conditional on reform and self-effort, to those whose earnings are rendered insufficient by wasteful spending. It can prevent by timely aid the poor man falling from poverty to extreme poverty; it can even in some cases raise him out of poverty altogether.

But in the case of those two-fifths of the patients who belong to the primary poor, who live in chronic want, unless the help given is sufficient to eject them out of that class altogether, to shoot them up into the class above, where life is at least a struggle and not a defeat, the time and money spent alike by the medical and the social service department is predoomed to loss. The patient is cured of one disease only to be stricken with another—only helped out of one financial crisis to fall into the second. Thrift is impossible, since he can provide for the future only by depriving himself of present necessities; he is incapable of self-effort, since all effort, mental as well as physical, is the product of the consumption within the body of food of which he has not a sufficiency. The more that is spent on such a patient, the more is ultimately lost, and he goes down into his grave carrying with him the odd hundred pounds or more that have been vainly sunk in him in the endeavors to keep him alive.

Although it is possible that the proportion of the population, and consequently of hospital patients, in poverty is greater in London than elsewhere, it is nevertheless certain that the number of sick too poor to profit by medical and social assistance in every great capital city of the world must be not inconsiderable.

What are the hospitals to do in these circumstances? How are they to deal with this class of patients? Some people might say that they should be referred to the Poor Law authorities. This is a mistake. Although poor, these persons are not paupers; although "in want," they are not, to use Mr. Booth's contrasted terms, "in distress." Moreover, the Poor Law authorities would be in just such a fix as the voluntary hospitals. What the majority of them require is 25 percent increase in wages or in work, and to provide this the Poor Law is just as powerless as private charity. Subsidies in aid of wages only aggravate the evil they attempt to cure.

Poverty due to low wages and irregular work can be abolished only by combined action. The causes in the first instance are social, not individual, and can be attacked only by social measures. Whether it is inevitable that some fraction of the people must always be unable to earn sufficient to satisfy the barest needs of existence; whether the ideal of the French king, that every man in the land should have a chicken in the pot on Sunday, can never be realized; whether the argument that a degree of poverty is necessary for the welfare of the nation to secure the elimination of the unfit in each generation—such questions need not detain us on this occasion. It is enough that, so far as the causes of poverty and sickness due to poverty are social, the hospital can do nothing directly to counteract them. But if the hospital cannot act, it can give evidence, it can furnish data, it can state the facts in order that others may solve the problem. Not that this task is so easy as it seems; in the very nature of things a hospital supported by voluntary offerings must talk about what it does and not about what it cannot do. In making appeals, its principal mode of addressing the public, it is compelled to lay stress on what it accomplishes. To call attention to what it leaves undone is not a good way to obtain money.

Yet it is the interest of the hospital, more than of any other charity or agency for the assistance of the poor, to make the truth known, for, while other bodies relieve only that fraction of the population whose poverty is due to causes which they set themselves to alleviate, the hospitals deal ultimately with all poor people, since, as we have seen, poverty and sickness lead always finally to sickness and further sickness and death. All hospitals should combine together for the purpose, and should lose no opportunity of impressing on the public that, while money can scarcely be put to better advantage than the treatment of such illness as is unavoidable, or to be avoided only by an attention to health, which is more inconvenient than ill-health, yet money that has to be spent on treating illness that is merely the terminal phase of poverty is diverted from its proper use. Medical treatment should be directed against such illness as is an intrusion into the normal life of the sufferer, and not against such illness as is the outcome of the patient's ordinary mode of life. Though hospitals, out of humanity, must continue their ministrations to the very poor, yet, until poverty is abolished or diminished by other means chiefly social and economic, much of the money spent by them is lost.

In mentioning Dr. Guy Manson, superintendent of the fine 150-bed county hospital at Fresno, Cal., one of the Fresno newspapers attributes his excellent qualities, in part, to what it describes as "about two pounds of near-red hair." In addition, however, Dr. Manson is credited with one hundred and ninety-eight pounds of discretion, efficiency, good nature, and professional ability, the last-named qualification being directed particularly along surgical lines.

NEW YORK HOSPITAL FOR RUPTURED AND CRIPPLED.

New Edifice Built by the New York Society for the Relief of Ruptured and Crippled Contains Every Device for This Class of Patients—Best Substitute for Country Life Attempted—School and Kindergarten Under Board of Education.

By OUR NEW YORK CORRESPONDENT.

IT is only of late years that society has awakened to the relief of handicapped cripples and to the possibility of making an increasing number independent and useful members of the community. In the dim past the Orientals turned their cripples into the wilderness, ancient India cast them into the Ganges, the Spartans hurled them from precipices, and the Jews banished them to beg by the wayside. For centuries their principal calling was jester or beggar, but, with the comparatively recent advance in orthopedics and the wave of general uplift, they are now either restored to health or at least fitted with apparatus that makes available the vocational training offered in special hospitals and schools.

It is impossible to estimate with any degree of accuracy the number of cripples in the United States. The Department of Child Help of the Russell Sage Foundation has just finished a two-year exhaustive survey of thirty-seven of our institutions for crippled. Of these, ten were hospitals, fourteen convalescent homes, and thirteen asylum homes. The survey was undertaken to procure detailed information regarding present conditions as a basis for work toward standardization. Dr. Hart has the report now in press. It bids fair to make not only an extremely interesting volume, but will doubtless go far toward the discovery of the most efficient methods of bringing hope and cheer to approximately 250,000 cripples in the United States.

Fig. 1. Hospital for Ruptured and Crippled—Front view.

Among the first to come to the aid of this class of "physical defectives" in America was the New York Society for the Relief of the Ruptured and Crippled. This society came into being in 1862 through the efforts of the late Dr. James Knight. The high standards of professional skill and traditions of tenderness toward these unfortunate pa-

tients, insisted on by Dr. Knight as surgeon-in-chief of the original hospital built in 1872, are upheld today by Dr. Virgil P. Gibney, surgeon-in-chief of this splendid new hospital, opened in 1913. Dr. Gibney served under Dr. Knight for many years, and with six members of the present board of trustees, sons or grandsons of the early boards, enjoys the closest cooperation in his successful endeavors toward careful and efficient management.

In the construction of this new hospital care was taken to have large courts for plenty of light tation, represents the best possible city substitute for life in the country.

The excellent floor plans visualize, far better than any detailed description, the admirable results obtained by the architects, Messrs. York & Sawyer, and the building committee.

All supplies are delivered through the northwest court at a covered platform the height of a wagon-bed. They are lowered on an electric lift to the service yard on the basement level. A glass roof covers part of this yard, and the crated goods are here unpacked. From this yard opens a vault

Fig. 2. Hospital for Ruptured and Crippled—School and kindergarten.

in the upper stories, and wide areas for sufficient light and ventilation in the basement. It is the most modern type of fireproof construction, designed in the Renaissance style of northern Italy. The wall surfaces and the shafts of the octagonal columns are constructed of a buff wire-cut brick, laid in Flemish bond. Secondary cornices, band courses, capitals, etc., of ornamental terra-cotta tone in with the brickwork, the main cornice being of copper. This special hospital, with an out-of-door annex to every ward and sufficient roof space to conduct the ward work and school work in the open, with a minimum amount of transpor- for coal used in the kitchen and the forges of the brace shop, and also a small autopsy room, lighted above, containing two mortuary receptacles.

There is a complete plant for heating, ventilating, lighting, power, and refrigeration in the basement and subbasement. The kitchen is equipped with strictly modern cooking apparatus, and the floor and walls are of white tile. Two automatic dumbwaiters, serving the main pantries, open directly into the kitchen. The laundry contains, in addition to the modern individual motor-driven apparatus, two large sterilizers, a Kenyon-Francis for dry sterilization and another

for moist. Both are built into the laundry wall and fed from a room opening on the main corridor near the freight elevator. The brace shop, with its auxiliary rooms for sewing, leather work, etc., connects directly with the dispensary, on the floor above, by a separate staircase and dumbwaiter. All the machines are of the latest design, and overheated shafting is avoided by direct-connected motors. Here all braces, trusses, etc., for both in- and out-patients are manufactured and kept in repair.

Dispensary and in-patients are admitted at the westerly entrance into a beautiful, large waiting room two stories in height. High windows on the north and south give an abundance of light and natural cross ventilation. A cross-vaulted ceiling, painted decorations, and a quarry tile floor, with a marble border and base, render this room extremely attractive. In the rear is an inclosed space for the registrar, admitting clerk, and cashier. On the right of this inclosure is the door entering the hernia department and on the left the orthopedic, thus giving the registrar control of the dispensary patients. The three rooms of the hernia department have built-in cabinets for trusses, etc., and each is fitted with curtains hung from the ceiling, which, when drawn, divide them into alcoves. The large room in the orthopedic department for the examination of children contains twelve booths, separated by low partitions of Knoxville marble. All the floors of the dispensary are of tile, with a tile sanitary base. The wisdom of planning the brace shop with its finishing rooms, the x-ray department, the gymnasium and Zander room, the quarters for electrotherapy, vibrassage, hydrotherapy, and baking, to be of practical service as accessories to the out-patient department, has been fully demonstrated by the efficiency of this dispensary. Last year 11,928 patients were recorded for treatment in the orthopedic department, and 4,399 on the hernia side. The gymnasium was well patronized by children in need of muscular development, and hundreds of early cases of lateral curvature were successfully corrected. Massage operators are supplied for out-patients as well as those in the hospital wards, and, by cooperation of the College of Dental and Oral Surgery, the teeth of all patients receive proper care. A social service department has recently been organized to cooperate with the dispensary.

Fig. 3. Hospital for Ruptured and Crippled—Children in the solariums.

The two main staircases, located in the east and

west wings of the main building, are entirely inclosed and separated from the main corridors by fireproof doors. Emergency stair-cases in the north wings are also inclosed, and have exits at the second floor to the roof over the court, from which two fire-escapes lead to the street. Inclosed passenger elevators, large enough to receive stretchers, serve the two sides, and a freight elevator near the service entrance runs from the subbasement to the sixth floor.

The second floor, a low story, is entirely given up to living quarters for the superintendent, staff, matron, housekeeper, graduate nurses, and female help. In the plan of this floor one notes that the superintendent's suite is so placed as to control the staff rooms, while the matron's has control of the graduate nurses and female help.

The four ward units of the third floor are severally separated from the main corridor by double doors. The flooring of the wards is of an imported buff tile; of the corridors and dining rooms, terrazzo, divided with marble borders; and of the quiet rooms and toilets, white tile. Every dressing room has a bracket for the harness used in adjusting plaster jackets, a sink, and water and instrument sterilizers. The toilet and bath rooms are spacious, to render easy entrance and egress to patients in wheel-chairs. Each contains, besides the usual fixtures, a marble bathing slab, with sink attached, for patients that cannot be bathed in the tub. The three south wards open directly on the two loggias, while the flat roof over the low northwest wing is accessible from the main corridor.

The plan of the fourth floor duplicates the third, save that the operating suite takes the place of the ward unit in the northeast wing. The main operating room is naturally lighted by a north window skylight constructed of steel and wire glass. Its amphitheater has fifty seats for students and visiting physicians, and is entered by a staircase from the floor above. The small pus operating room has a gallery with fourteen seats, and is also accessible from the floor above. These seats in the amphitheater and gallery are supported on brackets, and made of enameled iron modeled somewhat like a bicycle saddle. They are not only sanitary, but allow a maximum space for passageway. The operating suite is fitted with thoroughly modern equipment, and the floors and walls of the operating, sterilizing, and instrument rooms are of white tile. There were 683 opera-

Fig. 4. Hospital for Ruptured and Crippled—Roof gardens are the best substitute for the country.

tions for the correction of deformities and 478 for hernias performed during last year in this institution.

The school and kindergarten, under the supervision of the board of education, are conducted on the fifth floor. All the children able to attend school assemble for morning exercises in the large central room. This assembly room, with its cross-other by the girls. A large part of each section is roofed over, so that patients may remain in the open even in stormy weather. The attractive view in all directions is unobstructed, and danger avoided by a wire mesh screen built above the low masonry parapet. Meals may be served on the roof from pantries on this floor. The solarium, with its dependencies, is so planned and equipped

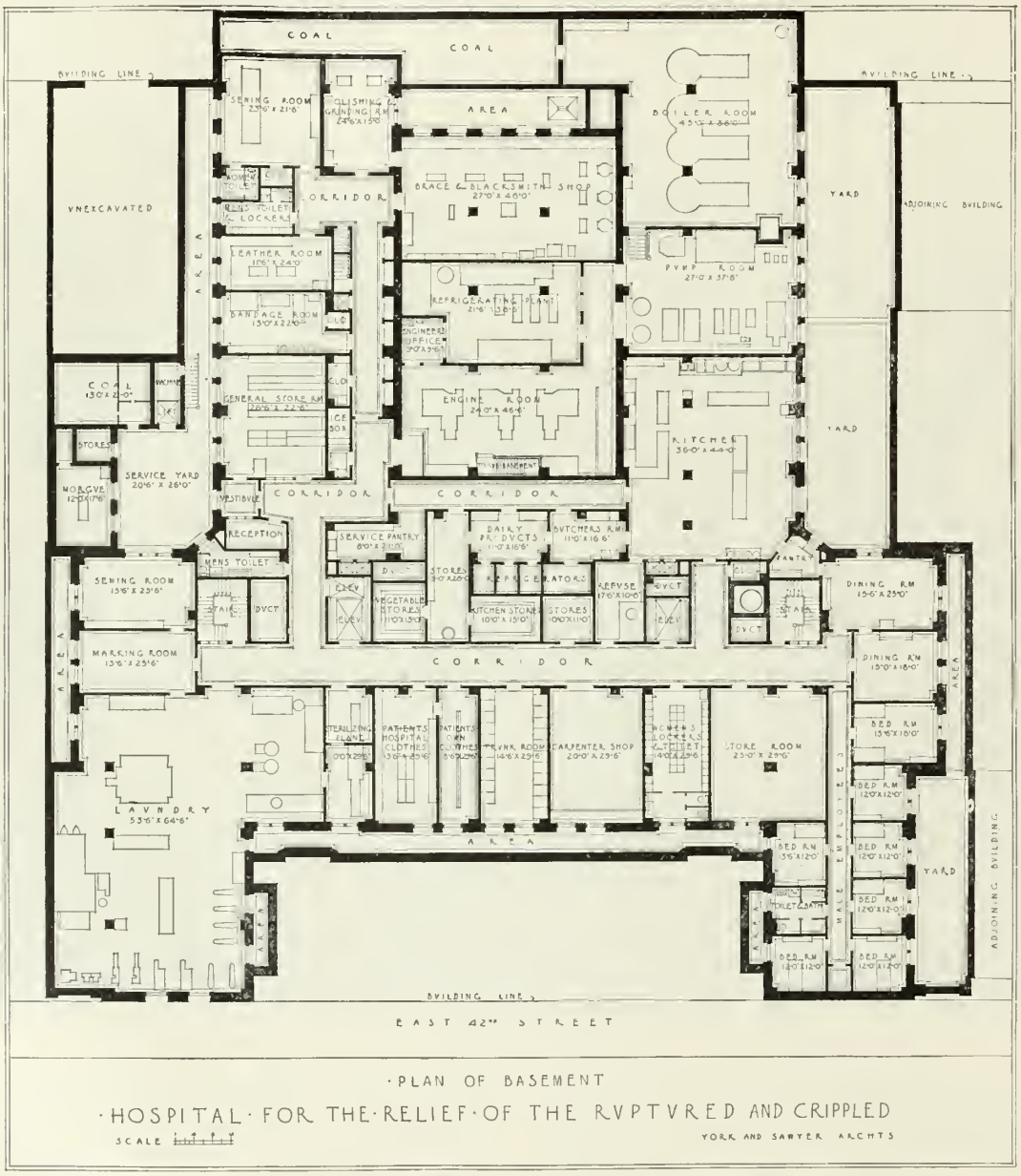

Fig. 5. Hospital for Ruptured and Crippled—Plan of basement.

vaulted ceiling and quaint decoration of a nature to interest the little ones, is also used by the kindergarten, for serving the midday meal to all the school children, for a play room in the afternoon, and for special entertainments.

The sixth floor, planned with a flat roof for outdoor treatment, is divided by the solarium into two sections, one utilized by the boys and the that it can be utilized as an isolation ward in the event of a contagious outbreak in the hospital.

The New York Society for the Relief of the Ruptured and Crippled furnishes medical treatment, braces, trusses, and bandages for every curable variety of deformity to the very poor, gratis; to others at cost of manufacture. The society fully realizes that, in spite of splendid

equipment, city life on the most spacious roofs, as an adjunct to cure of these physical defectives, is but a poor substitute for life in the country. While they are exerting every effort to secure funds for another hospital in the country, many charitable organizations are cooperating by receiving crippled children from this institution at Robin's Nest, Bath Beach, Sea Cliff, Aldrich Farm, and many other seaside and convalescent homes for the summer months.

A national organization, known as the Welfare Commission for Cripples, with many of our most prominent orthopedic surgeons on its membership roll, has existed for some years. Coordinate work for the cripples in New York received a decided impetus in 1913 by the organization of the Federation of Associations for Cripples. This federation, comprised of fifteen associations and societies of Greater New York, and cooperating with thirty-two other similar organizations, has launched a quarterly known as the "American Journal of Care for Cripples." The publication is edited by Douglas C. McMurtrie, with a staff of medical men as associates. Two numbers have appeared, and are not only attractive to the eye, but highly commendable from a literary standpoint.

At the last annual meeting of the Welfare Commission for Cripples the Journal was designated as its official organ, and the commission will cooperate with the federation in this wide field of usefulness.

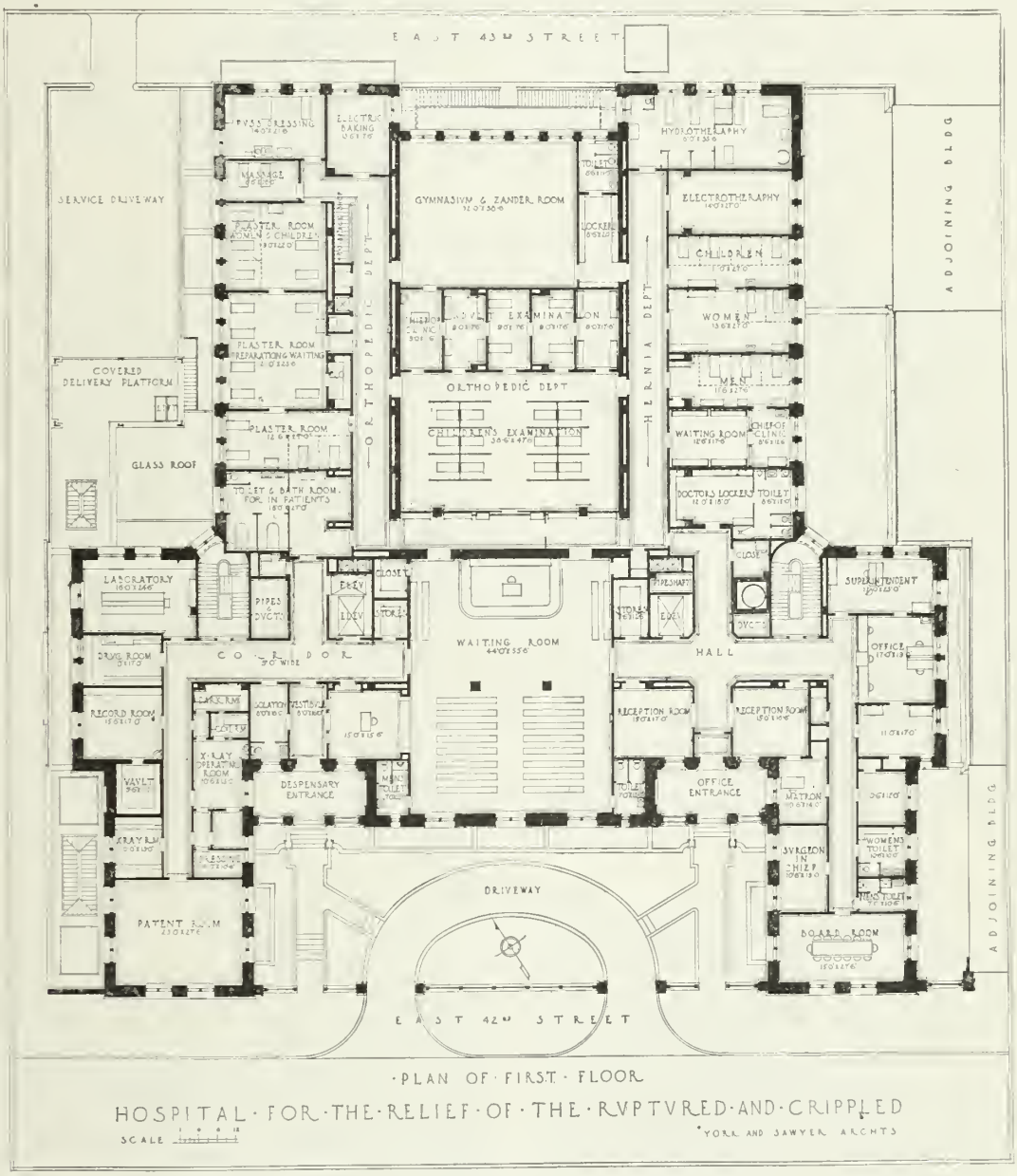

Fig. 6. Hospital for Ruptured and Crippled—Plan of first floor.

FEEDING THE HOSPITAL—THE FOOD.[1]

Vegetables, Cereals, and Fruits—Their Food Values, Methods of Preparation, and Cooking—Peculiarities of Each and Their Uses for Well and Sick.

By MISS LULU GRAVES, Dietitian Lakeside Hospital, Cleveland.

PAPER IV.

VEGETABLES, cereals, and fruits furnish us the necessary carbohydrate for the use of the body. The carbohydrate in vegetables and cereals is chiefly starch, and in fruits it is sugar. These food materials have very little fat, but are rich in mineral salts, and, with the exception of the cereals, have enough water in their composition to aid quite materially in supplying the needs of the body in that respect.

All of these food materials are obtained from plants—vegetables largely from the root, stem, or leaves; cereals from the seeds; and fruits are what the name implies. These plants are made up of innumerable cells, the walls of which are cellulose, with the starch grain inside. The older the plant, the tougher this cellulose becomes, and the hardness of this fiber plays a large part in the palatability and digestibility of vegetables.

If the vegetable be young and tender, it is at its best when cooked for a short time only and in a small amount of water. By this method a minimum of the salts is dissolved out and the sogginess of overcooked food is avoided, and in green vegetables the natural color is retained. If the vegetable be older, it requires a longer cooking in a larger quantity of water in order to break up the intercellular tissue and allow the starch grain to be reached. Older vegetables are apt to have lost some of their original water by evaporation, and it may be regained by this method of cooking.

The flavors also are affected by the method of cooking. Flavors are due to mineral salts and oils, many of which are volatile. If not properly cared for, these may be dissolved out in the water during cooking and thrown away, or escape in the vapors. In the case of strong-flavored vegetables, such as onions, cabbage, and turnips, this is desirable; or, when vegetables have been stored for some time, a strong flavor may develop which we prefer to partially lose. This may be done to a still greater extent if the vessel in which they are cooked be left uncovered. Many people have difficulty in digesting cabbage, cauliflower, and brussels sprouts because of the sulphur present, but they can eat these vegetables with impunity when the sulphur has been disposed of in the cooking. If the vegetables are fresh, the objectionable odor may be prevented from penetrating through the house by the addition of a piece of charcoal to the water during cooking, as the carbon will absorb the sulphur. On the other hand, chemical changes may take place when the heat and moisture are applied for cooking, in which flavors and odors are developed. This is true in cereals and a few starchy vegetables.

So much of the palatability and digestibility of our vegetables depend on their freshness and the method of cooking that we cannot make sweeping statements that certain vegetables are beneficial in certain diseases or conditions and harmful in others. A vegetable which is crisp and tender and has been recently brought from the garden may differ very materially in composition from the article which is served under the guise of that vegetable after it has passed through the treatment given in marketing, transportation, and cooking. A vegetable or fruit which must be shipped from its native place before ripening may not be used in some instances where a naturally ripened product could well be utilized. This is one of the points in favor of canned vegetables and fruits.

Green vegetables are much used in a raw state for salads and relishes, but the starchy ones should be cooked before being eaten. Boiling them cooks the starch and makes it more soluble; baking also does this, and to a small extent converts the starch into sugar.

Starch is a very stable substance, and vegetables with a high percent of starch may be kept in good condition for a long time; for that reason they may be had at any season of the year. Green vegetables are not so valuable from the standpoint of nourishment as the starchy ones, but they are nevertheless very valuable in the diet. They contain an abundance of mineral salts, which are very essential in metabolism. They furnish "bulk," which aids digestion; when fresh, they are appetizing and stimulate the flow of the gastric and saliva secretions. This is especially true of those which have a pungent quality, such as cress, mint, peppers, etc., and some of them are antiscorbutic in action. They are easily digested and give pleasing variety to the diet. Their food value is made greater by being served with butter or cream sauce if cooked, and by use of salad dressings or oil if served as a salad. With us the

[1]This is the fourth in a series of papers on "Feeding the Hospital." Last month, "Milk, Butter, Coffee, Tea, and Cocoa." Next month, "Meat, Poultry, Fish."

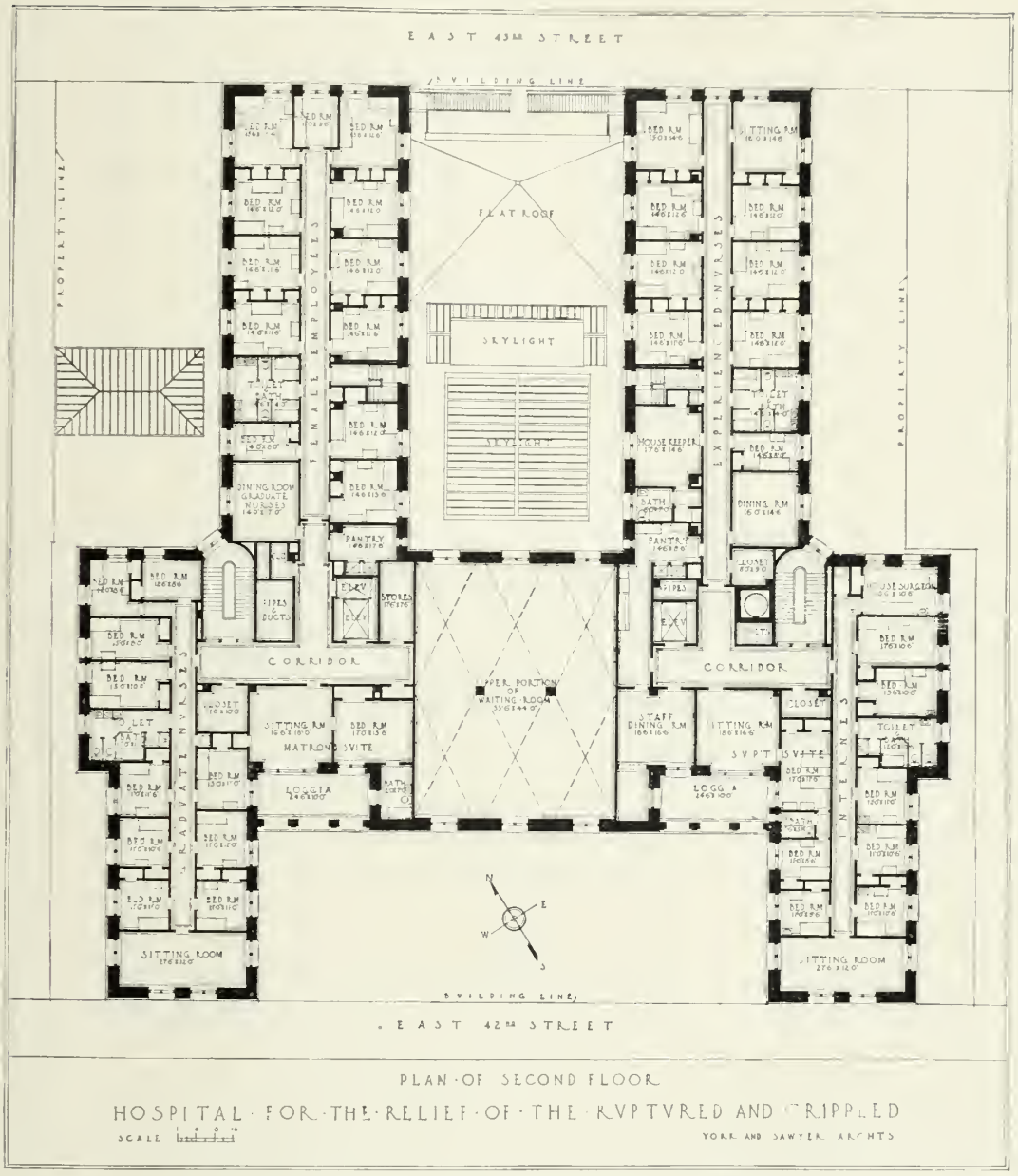

Fig. 7. Hospital for Ruptured and Crippled—Plan of second floor.

potato is a staple article of diet because it is inexpensive, has high nutritive value, and may be grown in almost all parts of the country. If properly cooked, it is easily digested; baking or boiling with the skin on prevents the mineral salts from being dissolved out and retains the potash, which lies next the skin. They should be pricked and the skin broken to allow the steam to escape if they have to be kept for a time or carried some distance before serving, as is apt to be the case in a hospital. If this is not done, as the potato cools the steam settles around the starch grain, making it soggy. Overcooking or keeping in a covered vessel after cooking will have the same effect. Potatoes are a bulky food, and should be used judiciously. New potatoes, like unripe fruit, have unripe starch, and should not be eaten by children or people with impaired digestion; on the other hand, old potatoes, particularly if they are allowed to sprout, have some of the starch changed to gums and sugar and become waxy.

Beets and carrots are other vegetables with a high percent of carbohydrate. They contain sugar as well as starch. When young, they are much more nutritious and readily digested than after the cellulose has hardened. Both have a characteristic flavor, and are desirable for salads or relishes as well as for a vegetable. Adding vinegar and other acid to beets softens the fiber. The leaves of the young beet are used for greens.

Onions and all vegetables belonging to the cabbage family are wholesome, but not especially nutritious. They contain mineral salts, some sugar, and much fiber. The strong flavor of onions is

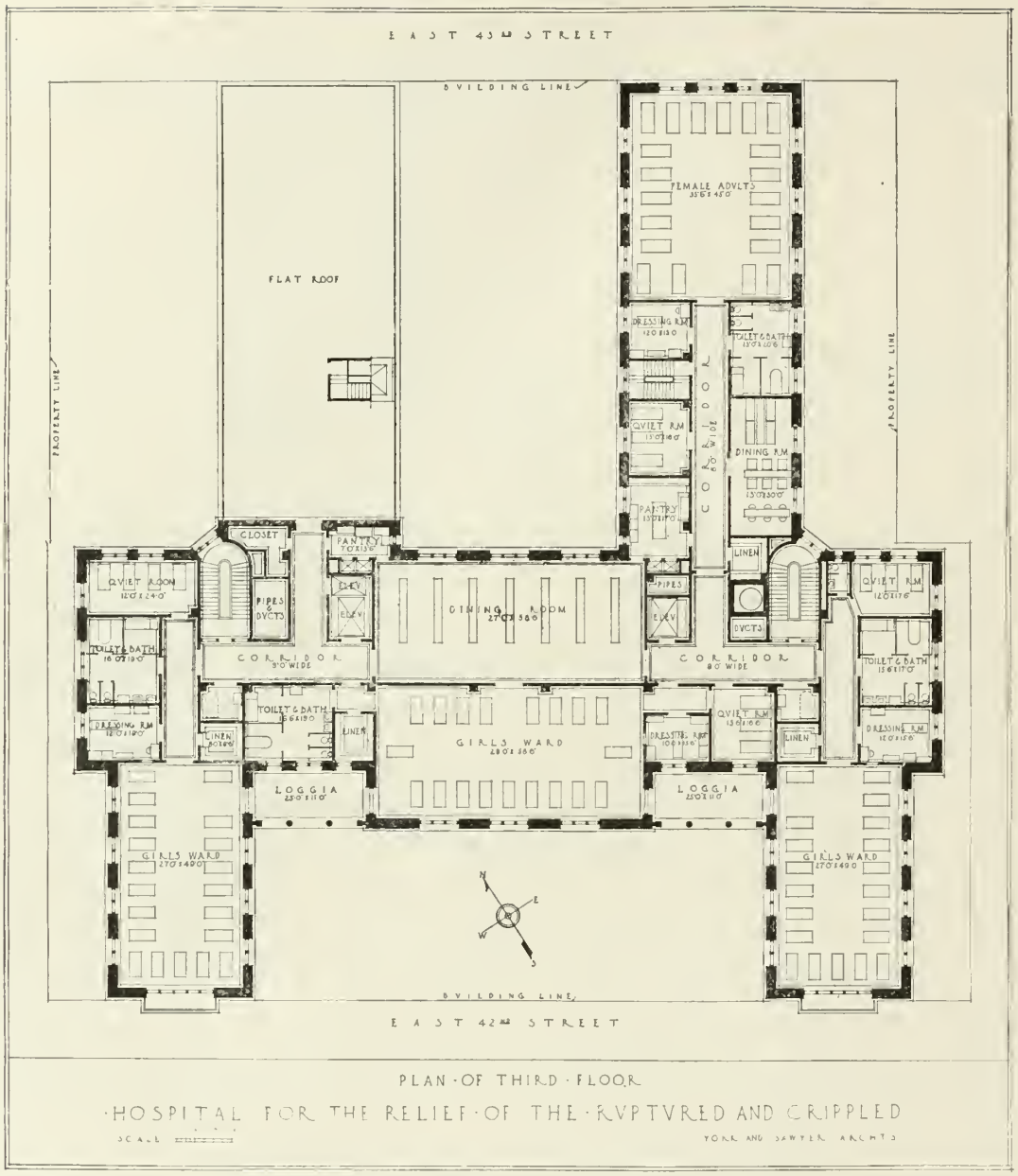

Fig. 8. Hospital for Ruptured and Crippled—Plan of third floor.

due to volatile oils, much of which may be lost in the cooking. They are utilized in soups, salads, etc., for their distinctive flavor. The Spanish and Bermuda onions have a much milder flavor than the others, and consequently are better liked as a vegetable.

All "head" vegetables—cabbage, cauliflower, artichokes—should be well washed and placed head down in a pan of water to which salt or vinegar has been added, in order to draw out any insects which may be hidden among the leaves. Thompson, in his "Food and Dietetics," says all foods should be well washed, not only for the purpose of removing dirt, but because of possibility of contamination from the water with which they have been watered or the fertilizer in the soil, and because the larvæ of the tapeworm and roundworm may adhere to their surface.

Tomatoes are in great favor as a food material because they may be served in so many ways, both cooked and raw—as soups, vegetables, salad, relish—and because they contain so many acids, which make them appetizing and an aid to digestion. Tomatoes and cabbage, when not properly cooked, may cause difficulties of digestion, which produce calcium oxalate in the urine. For this reason they should not be given to patients with gout or rheumatism.

Asparagus and artichokes are prized for their delicate flavor. Like all flavor foods, they are expensive because of the small amount of nourishment they contain. The form of carbohydrate in

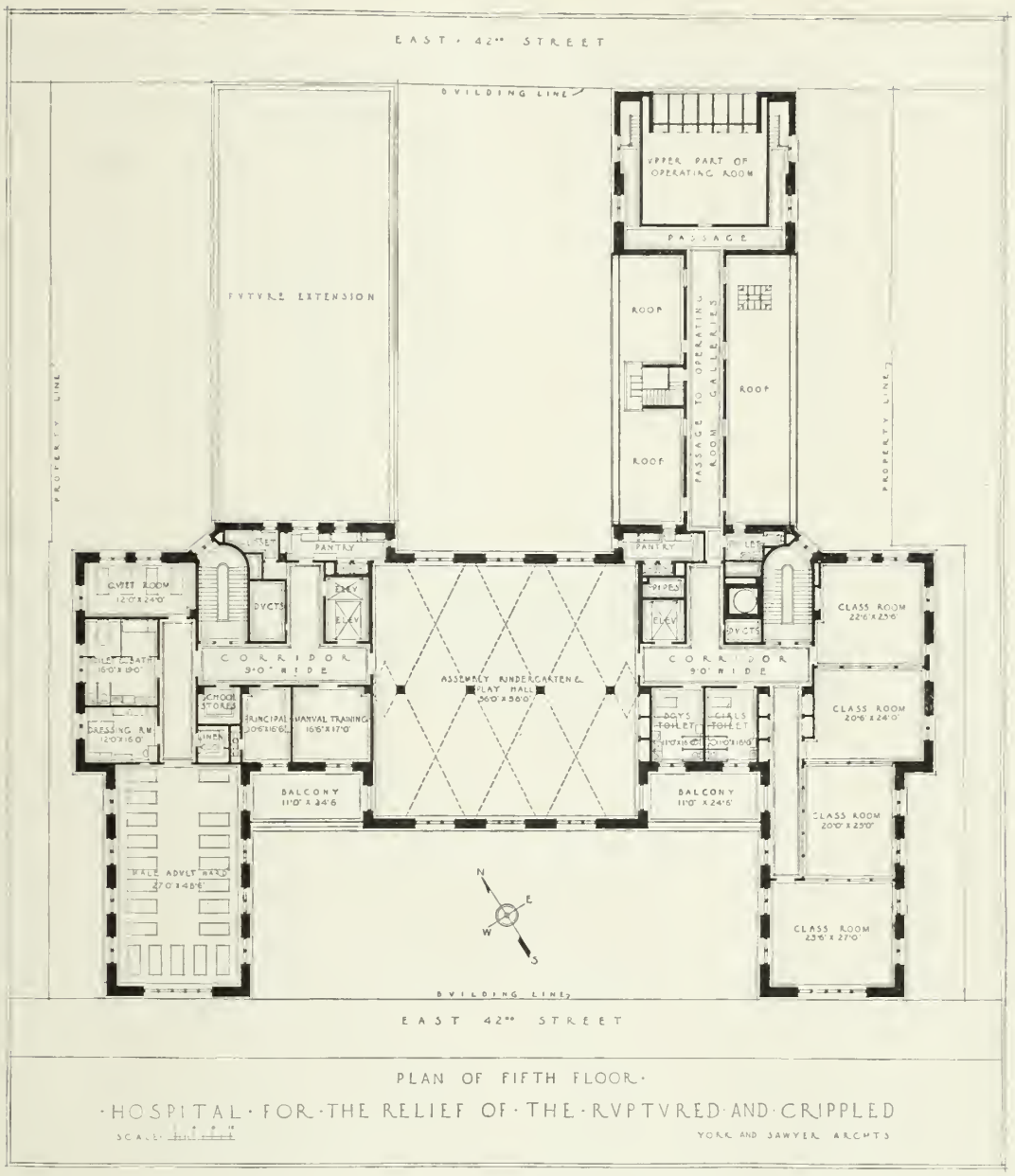

Fig. 9. Hospital for Ruptured and Crippled—Plan of fifth floor.

these vegetables is inulin. As this is not changed to sugar in digestion, they may be given to diabetic patients. Asparagus contains a substance known as asparagin, which has a diuretic effect, and also contains a high percent of purin, which is excreted by the kidneys in the form of uric acid. Lettuce and cress are chiefly cellulose and water, with very small amounts of protein and sugar, and acids and salts, which give them an aromatic flavor. For this reason they are liked as appetizers and to give variety to the diet. In this same class we might place celery and chicory; when blanched so that they are crisp and tender, they serve as relishes. Celery seed has a slight medicinal value, and celery salt furnishes a pleasing flavor for soups, sauces, stuffings, etc. The roots of the chicory are sometimes substituted for coffee.

In cereals and legumes we have all the nutritive constituents represented, though the fat is very low, and mineral salts not so numerous as in green vegetables; but the protein and carbohydrates are in large enough amounts to make them very valuable as food material. The protein differs somewhat in different cereals, but the value is much the same. They have another nitrogenous substance known as amides, which also varies, but is more abundant in the growing plant than in the seeds.

Corn and oats have more fat than the other cereals. Corn meal is rich in fat if the germ is left in the meal, but it becomes rancid much more

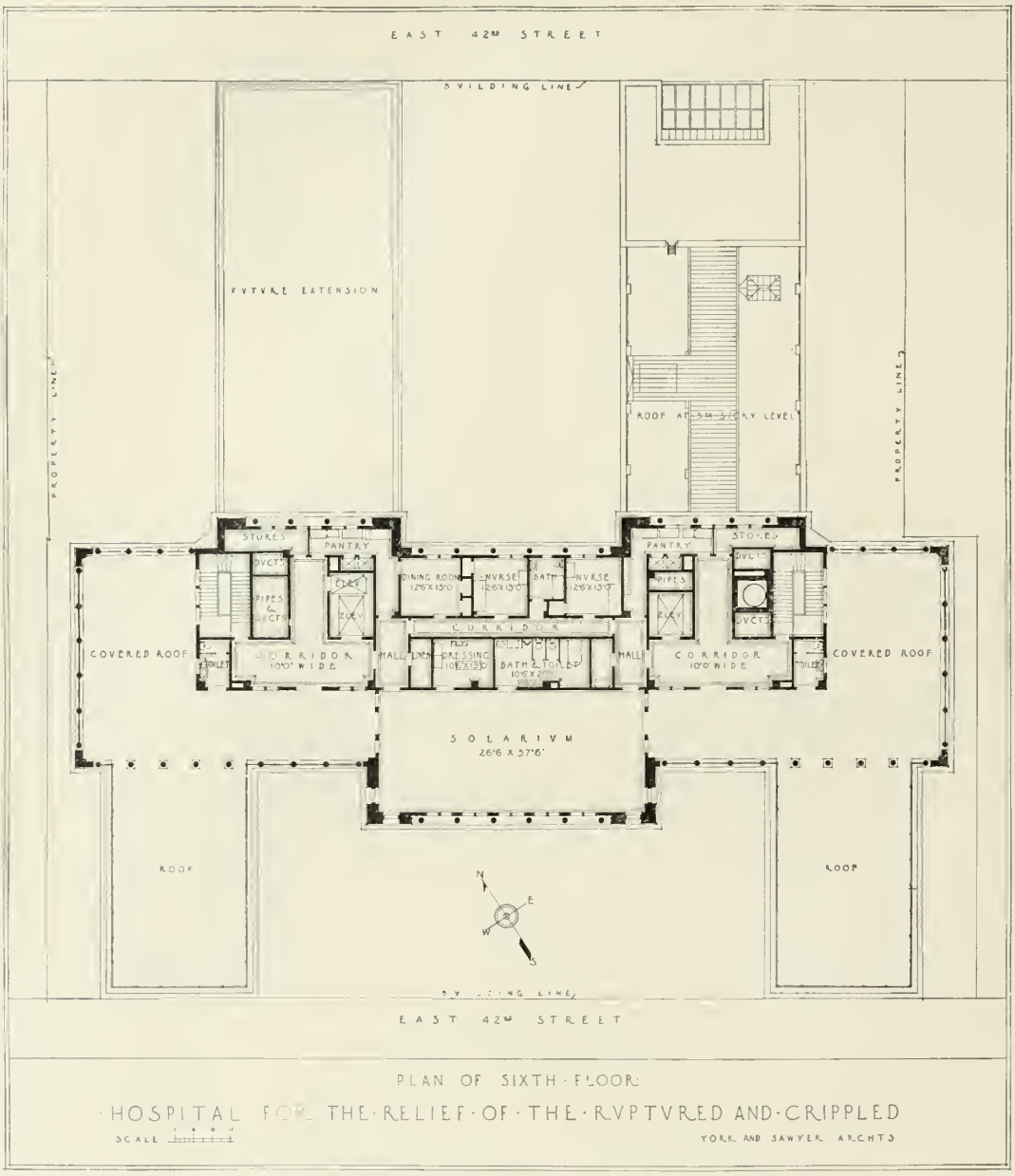

Fig. 10. Hospital for Ruptured and Crippled—Plan of sixth floor.

quickly. It has less nitrogen than the other cereals, and the refined product has lost much of its food value. In hominy the hull is removed, but all of the germ remains. This is not a popular cereal, but it is valuable from the standpoint of nutrition.

Both corn and oat cereals are known as "heating" foods because of the abundance of starch and fat present. Oats are either rolled or cracked. The manufacturers claim that the oats that have been heated and crushed between rollers require less cooking, but these claims are misleading, as they have not been sufficiently cooked. All cereals require long cooking in order to break down the intercellular tissue of the hard envelope which incloses the starch grain and make the grain itself soluble. A cereal containing the whole grain requires more cooking than one made from only the minor part of the grain. Much water is absorbed during the cooking of cereals, so it should be a slow process. Cooking overnight in a fireless cooker or a steam kettle at a very low pressure, if the quantity is very large, is the best way to thoroughly cook the cereal and develop the flavor.

Wheat is the most widely used cereal. It is ground and part of the outside removed in making Cream of Wheat and Farina; it is rolled and the whole grain used in making Pettijohn; dextrinized, and with malt or honey added, it is Grape Nuts; ground and bolted, it is made into flour of various grades, according to the process of manu-

facture, ranging from "Patent" to Graham. "Whole wheat" flour is a misnomer, as the outer covering is removed in making this flour. We have gluten flours on the market which claim to have all or nearly all of the starch removed, but they are not to be relied on. After making or having made tests of every brand of gluten flour obtainable in Chicago and a few other places a couple of years ago, we found none that was safe to give to a diabetic patient. Our conclusions have been confirmed by tests made at the University of Chicago.

Macaroni, spaghetti and noodles are made from the hardier varieties of wheat. They are also rich in carbohydrates and proteins, and are almost completely absorbed in the body. When combined with cheese, tomato, bacon, or milk, they make a most nutritious and economical food.

Rice is widely used for people with weak digestion, though it is not particularly easy of digestion, and the cooking of it is a most important factor with regard to its palatability and digestibility. It is very well absorbed, however, and is so low in fat that no difficulty occurs from that source.

We have on the market a number of so-called "prepared" breakfast foods which are palatable and nutritious, but expensive as compared with the other kinds. Their manufacturers claim for them that they are cooked and predigested by malt or other preparations, but, as a matter of fact, they do not have enough malt to sufficiently digest them, nor is the dextrinization sufficient in the brands that are "predigested" in that way. If they were sufficiently done, it would be no advantage to the healthy individual to have his food digested outside of his body and thus deprive his digestive organs of the stimulus given by the grain. Only a much impaired digestive tract could be benefited by it.

Other carbohydrates which are of high food value, easily digested, and well absorbed are tapioca, sago, and arrowroot. As a general thing, these are combined with milk, egg, or fruit juices, which add to their desirability both as a food and for the flavor.

Legumes have a higher percent of protein than cereals, but they are less completely digested, and the flavor is not so well liked as a rule. As a source of protein they rank next to meat and eggs in importance, and are much used by vegetarians. Fresh green peas and beans are easily digested, but when they are old they are hard to digest unless they are cooked a long time. Dried legumes are tough, and should be soaked for several hours before cooking. It is said that legumin and salts form an insoluble compound which cannot be made soft, which means that peas and beans should not be soaked nor cooked in water that is very hard. If cooked with pork, their food value is very much increased and the combination is more palatable. Legumin is sometimes referred to as vegetable casein because of the similarity to casein in milk in its composition and action.

Kidney beans cost less and are more popular with people who do hard physical labor. Lima beans are very wholesome, and more popular with those who have less hardy appetites. Soy beans are used much in the Orient, but are not fully appreciated here. Soy bean flour is used in preparations for infant feedings to some extent.

Another legume not properly appreciated is the peanut. It has both fat and protein in large percentage, has an agreeable flavor, and may be utilized in many ways. During the roasting process, which is the method of cooking peanuts, the flavor is developed. They furnish an extremely well-balanced food. Dr. Hall, of Northwestern Medical School, says that peanuts and apples, if properly masticated, will sustain life for a long time. Meal made from peas and beans may be had at a moderate cost, and is very good for thickening soups, making gruels, etc., though a puree of vegetables is better for cream soups. Often when the digestive organs are not equal to the task of disposing of vegetables and cereals which are served in the ordinary way, they can easily take care of the strained cereal of vegetables.

Gruels, purees, and cream soups are extremely nourishing, and logically follow the milk-and-broth diet when a patient is able to utilize them and the "building up" process begins. Another advantage is the variety of ways in which they may be served, which leaves no excuse for a monotonous diet when this stage is reached. Gruels prepared from thoroughly cooked oatmeal, served plain at one time, with cream at another, a well-beaten egg at another, with beef tea or beef juice, make a goodly number of changes, which may be followed by rice or farina gruel, with the same variations, and fruit juices or sherry in addition. Prune juice is especially good with these gruels; these, with broths, custards, and gelatins, give a wide enough range to prevent frequent repetitions, and can be managed even in large hospitals if there is the proper cooperation between the medical men and the kitchen.

Fruits are held by some people to be a luxury rather than a food; to be of dietetic value does not necessarily mean that a food must build tissue or furnish heat. The sugars in fruit do furnish some heat and energy, but fruits perform other functions equally important. They introduce into the system salts and organic acids, which improve the quality of the blood and react favorably on the

secretions; they serve as diuretics, laxatives, and antiscorbutics; they are refreshing, stimulate the appetite, and convey water into the body; they add a pleasing variety to the diet—not to mention their usefulness as a foundation for special cures and fads, such as the grape cure, etc. The delicious flavors of fruits are produced by compounds known as ethers in combination with the sugars dissolved in water, and the acids. There is no starch in ripe fruit, except in the banana. The acids are quite similar to each other, and all are organic; therefore they can be utilized by the body. The three most common are citric in lemons and oranges, tartaric in grapes, and malic in apples. These are typical acids, though most fruits have several kinds. Citric and tartaric acids are separated from fruit and used commercially for many purposes. Pectin and pectose are other forms of carbohydrate in fruits, and are the properties which cause the juice to "jelly," when boiled in the presence of the acids and sugar of the juice. Apples, grapes, and plums have a comparatively large percent of pectin and pectose, and are consequently more easily made into jelly than berries and many other small fruits.

A judicious use of fruit in the diet is very beneficial, the only danger being in the use of green or decayed fruit. Cooked fruit is safer than the uncooked, especially if overripe or not well ripened; the starch which may be present in green fruit is made soluble by the cooking, and the overripe may have bacterial action begun, which will be checked by cooking. Chemical changes occur in the presence of heat, which neutralize the acids and give different flavors.

Fresh fruits are well adapted to our needs in summer on account of their low caloric content as well as for reasons given above. Lemons and oranges are generally available, and they are agreeable to nearly everyone, qualities which make them most useful in the sick room. They may be used to encourage the consumption of water in renal disorders, or in any condition where much water is required. Made into ices and sherbets, they are less likely to disagree than ice cream, and are very refreshing to patients with a high temperature. A slice of lemon in the mouth will remove the disagreeable taste due to a coated tongue. Lemons and limes are valuable antiscorbutics owing to their vegetable acids, potash, and other salts. Pure lemon juice poured into the nose may often control epistaxis. Figs, prunes, apples, and berries have enough sugar to make them of high food value, and their seeds, skins, and fiber make them helpful as laxatives. Pineapple is not only appetizing and refreshing, but contains an enzyme which aids in the digestion of protein. A common proof of the action of this enzyme is found in the rapidity with which it will digest gelatin, a proof that many a housewife has had when trying to prepare a gelatin dessert with raw pineapple. With the exception of oranges and lemons, no other fruit is so beneficial in the diet of the sick. Some of our eastern physicians are finding pineapple juice very effective in cases of anorexia, and it is a rather unusual thing to find a patient in a hospital who will not enjoy preparations of pineapple if they enjoy any food at all. Bananas and pears are much more easily digested if cooked, particularly if baked; they are more readily broken up by the digestive juices, and flavors are developed which change the original taste very much.

Mastication plays a very important role in the digestion of fruits; bananas, melons, grapes, and blueberries are very apt to slip down the throat whole or before being finely chewed, thereby putting too much of a tax on the digestive organs.

Fruits are preserved by means of cold storage, and may be kept in excellent condition provided the temperature does not go below freezing. Preservation by drying is an inexpensive way of keeping fruit, and does not affect the food value to any extent, except in the loss of water; this is remedied by soaking the fruit before cooking for a sufficient length of time to allow the reabsorption of an amount of water equivalent to that which was evaporated in the drying process. As the drying process requires a great many hours, the soaking process should also be allowed to go on for several hours. In the commercially dried fruits sulphurous acid is used to prevent discoloration, as the fresh fruit is exposed to the sulphur fumes before drying. Some of the sulphurous acid escapes with the moisture, but enough remains on the fruit to have called forth a protest. There is probably not enough sulphur remaining to harm a healthy, normal person, but there is possibility of a weak digestion being affected by it. Here again the method of cooking is an important feature in the palatability and digestibility. If dried fruit is thoroughly washed, sufficiently soaked, and not overcooked, it may be made very appetizing, and is available for those who cannot afford the fresh fruit. Canned fruit has as much to be said in its favor as may be said of any cooked fruit. Since our canning factories are being managed on such efficient and sanitary plans, there may be some advantages in using fruit or vegetables which are canned in the same section of the country in which they are grown. They may ripen before being gathered and are not subject to the deterioration due to transportation, standing in open markets, and much handling, which our fruit is

apt to receive before reaching us unless it is grown in the vicinity. Canners have better facilities for sterilization and for keeping their fruits and vegetables whole and in good condition than our homes can possibly have. They get the product when it is in the best condition for canning; their scientific investigations in their own laboratories have taught them the exact temperatures that are best for each material, how to gauge density of syrups, and all other important points in preservation by canning.

Both fruit and vegetables being put on the market today by our best factories are as wholesome as the home product, and perhaps have been selected with more care than some of our home products.

THE NEED OF BETTER HOSPITAL EQUIPMENT FOR THE MEDICAL MAN.[1]

American Institutions Provide What Surgeons Need, But Neglect the Agencies Required by the Practitioner of Medicine—A Plea for Hydrotherapy and Physical Therapy Installations.

By EDWARD F. STEVENS, Boston, Member of American Institute of Architects.

As one visits the more or less modern hospitals of the United States, he will generally find beautiful operating suites, with modern plumbing, equipment, and instruments, the best that science has developed, in order that the *surgeon* may do his best work. But what do we find for the medical branch of the staff? A medicine closet for drugs, the ordinary bath tub two-thirds the length of the patient, the hot-water jugs and compresses, and a more or less up-to-date x-ray outfit. That is generally the extent of the equipment. How much longer will the medical men stay quiescent and allow their brother practitioners who have taken up the surgical side of the profession to get all the equipment, all the choice rooms, all the plums? Shall we go on building our hospitals without thought of the medical man, or shall we devote a little space for his needs?

Are the builders of the great modern public hospitals of Europe wrong in their theory and practice? For in every modern public hospital on the continent one will see the great medical department building or bath house equaling, and generally surpassing, the "operation" building in size and equipment. Unless this means the relief of human suffering, would the German, the Danish, and the Dutch governments spend the vast sums they appropriate for this splendid equipment? Or are all these departments mere fads and fancies of a few influential members of the staff, who wish to work out some new theory? This might be true in one institution; but would it be repeated in all of the newest institutions, each one a little more complete and far-reaching than the others? For one will find in the medical department such sections as mechanotherapy; hot air, warm, steam, light, electric, gas, radium, sand, sulphur, mud or peat, and sun baths; inhaling and pneumatic chambers; roentgen ray, with all its ramifications.

To the student of hospital architecture the question naturally arises, If these methods of treatment are essential for the well-being of our neighbors, poor and indigent, across the sea, why should we not practice them, or some of them, in our institutions? Just to show what some of the later European hospitals are doing along the line of medical equipment, I will refer to a few examples.

The Eppendorf, at Hamburg, is not now considered one of the newest hospitals, but has devoted a proportionally large space to the medical treatment building.

The Virchow, at Berlin, devotes even more space to this department than to the surgical.

In the St. Georg, at Hamburg, while the bath house is not so large in proportion, it is several stories in height and most complete in equipment.

At the Barmbeck, Dr. Ruppel's latest hospital, at Hamburg, the bath house is given the place of honor on the main axis, while the operating pavilion occupies a secondary position.

Bispebjerg, at Copenhagen, the newest large Scandinavian hospital, has devoted a large space to this department, which is entered by semi-underground passages.

In Munich-Schwabing (Fig. 1), one of Germany's best hospitals, one will find a most complete equipment. If we study this plan in detail (Fig. 2), we will find baths of every kind for the relief of suffering humanity. Commencing at the left is the roentgen ray department, the inhalation department, the rest rooms, pneumatic chamber, massages, and mechanotherapy; and in the center the various baths are arranged—the Fango or Italian volcanic earth bath, the mud or peat bath, sand bath (where the sand is heated and applied to the patient), the gas and electric light

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

baths; the general hydrotherapeutic room, with its spray bath of every description, its warm and cold plunge, its wading bath—all of these placed in a most magnificent room (Fig. 3). On the second story of this building is the great sun bath room, so arranged that, if the sun is too warm, the surface of the glass can be covered by a water curtain, as it were, thereby reducing the temperature of the room.

In this hospital I first saw the pneumatic chamber used for treatment. A patient needs rarefied air, and is sent to the hospital. He is placed in one of these roóms, surrounded by his books and papers. Pressure in the room is reduced to the desired amount, and the patient receives at home the rarefied air of the high mountains; or perhaps he is ordered a greater than atmospheric pressure, in which case the chamber is put under pressure instead of a vacuum.

The water bed (Fig. 4) is used for the relief of many troubles, and is considered one of the indispensable pieces of equipment. At the St. Georg I saw one poor fellow in this water bed, who had been for months in this position, eating, sleeping, and reading, and who could not have lived under other conditions. The water bed, or full-length tub, with adjustable hammock, one will see in many wards in Germany and Austria. In one hospital that I visited each medical ward had its water bed, and in other wards each bed was provided with pipes from the wall for cold water circulation in place of ice caps.

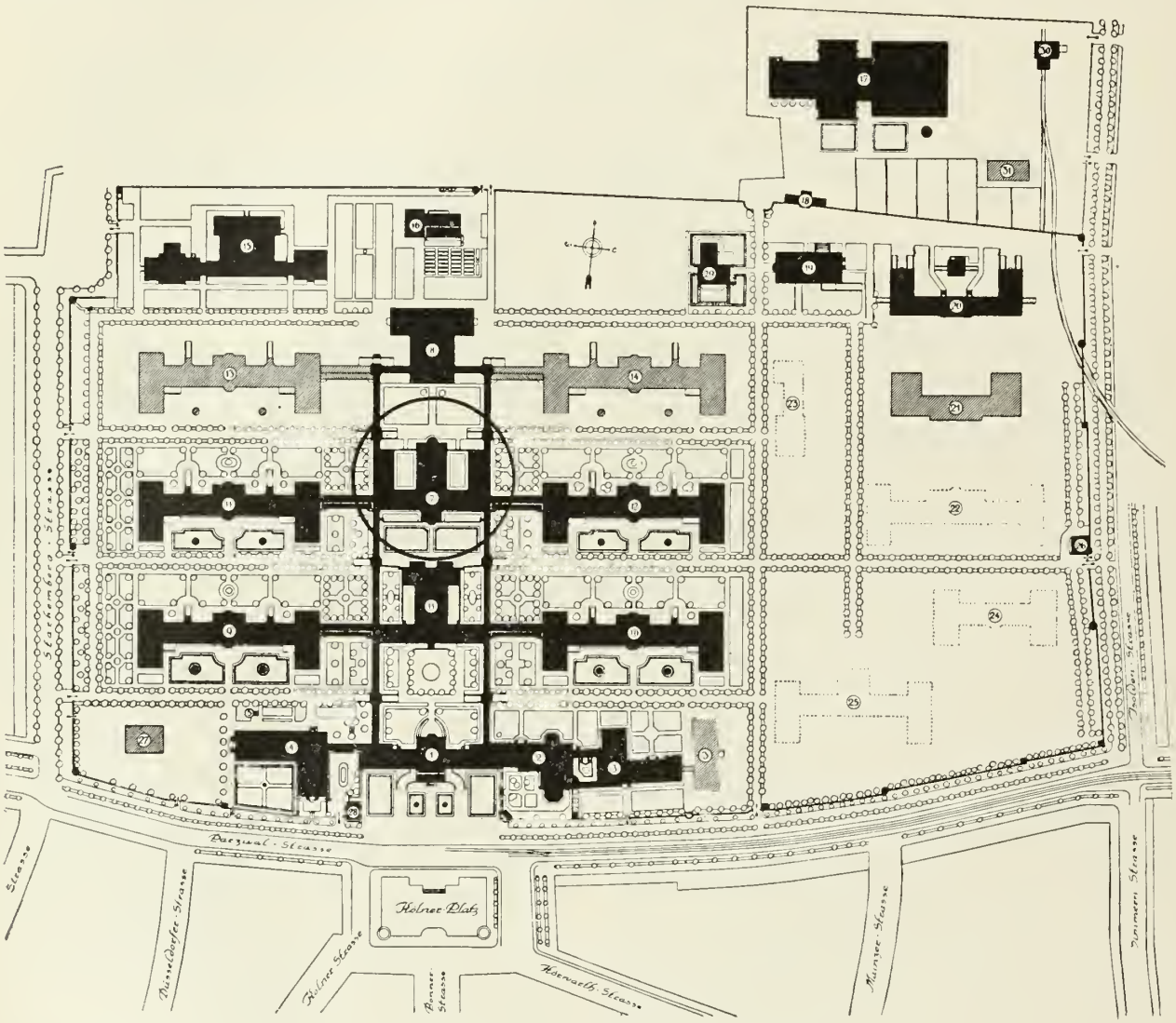

Fig. 1. München-Schwabing Hospital—Ground plan.

1. Main building.
2. Chapel.
3. Sisters' building.
4. Administration building and apothecary.
5. Benzine building.
6. Operation building.
7. Main bath.
8. Kitchen.
9. Male out-patients' building.
10. Female out-patients' building.
11, 13. Male patients' buildings.
12, 14. Female patients' buildings.
15. Disinfecting building and laundry.
16. Garden and workshop.
17. Machinery building.
18. Animal experiment building.
19. Pathological building.
20. Segregation building.
21. Contagion building.
22. Skin and sex disease building.
23. Mental disease building.
24. Children's building.
25. Gynecological building.
26. Janitors' quarters.
27. Director's residence.
28. Public lavatory.
29. Main administration building and residence.
30. Coal house.
31. Building for help of electric plant.

The sand bath (Fig. 5), where the patient is packed in sterile sand at the proper temperature, is found in almost every large European hospital.

The hydroelectric bath, the carbon dioxid bath, the plunge, and those mentioned before are just a few of the examples one will find in the general public hospitals of Europe. I am not referring now to the various sanatoriums which one finds all over the world, but to the general hospitals for the care of the poor and indigent. Should we not in America provide such equipment, that the patient suffering from arthritis, chronic rheumatism, or cellulitis, might have the proper mechanical, electrical, heat, and massage treatment, or the water bed for severe bodily burns or sores?

Should we not provide separate accommodation for the psychopathic patient? Why should we send our contagious and tubercular cases to separate institutions when, with proper equipment and segregation, which can be afforded in the general hospital, these cases can be taken care of with greater economy under one administration than under many?

Nearly every large hospital has some of these equipments, and few modern hospitals are built without the airing balcony, where the medical as well as the surgical patient may have the fresh air and sun treatment. There are few hospitals in the world which have a more complete mechanotherapy equipment than the Massachusetts General Hospital, at Boston, in its splendid Zander room (Fig. 6). But even here the service is largely that of the surgical side.

Today nearly every hospital, large or small, has its roentgen or x-ray outfit, and in many a more or less complete hydrotherapeutic department is provided.

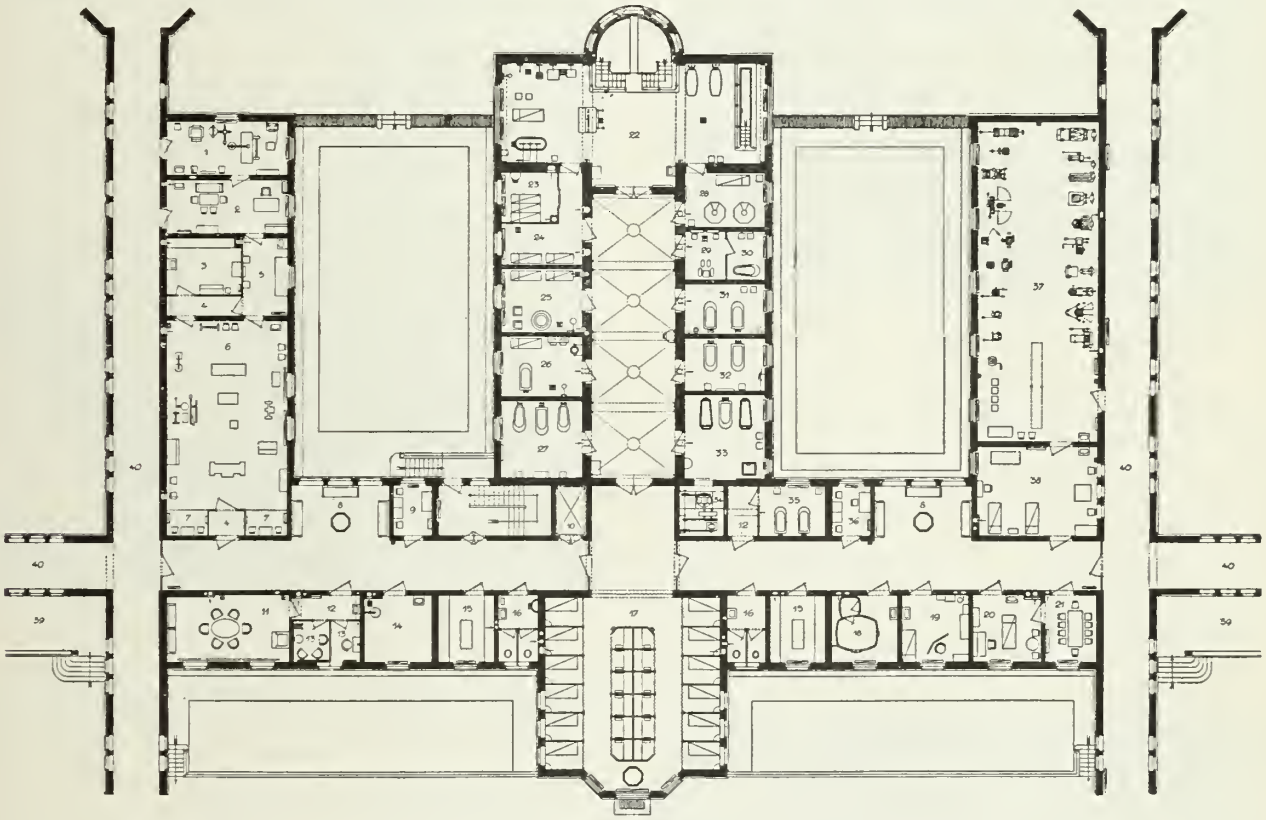

Fig. 2. München-Schwabing Hospital—First floor plan. Main bath.

1. Roentgen therapeutics.
2. Phyicians' room.
3. Dark room.
4. Light shaft.
5. Photograph laboratory.
6. Roentgen room.
7. Undressing room.
8. Waiting room.
9. Attendants' room.
10. Elevator.
11. Social room.
12. Ante-room.
13. Segregated room.
14. Light bath.
15. Wash room.
16. Toilet.
17. Rest room.
18. Pneumatic room.
19. Examination room.
20. Physicians' room.
21. Ante-room.
22. Douche room.
23. Hot air bath.
24. Warm air bath.
25. Vapor room.
26. Fango mud bath.
27. Mud bath.
28. Heat bath.
29. Four-cell bath.
30. Electric water bath.
31. Gas bath.
32. Salt water bath.
33. Sand bath.
34. Sand room.
35. Sulphur bath.
36. Female attendants' room.
37. Therapeutic gymnastics.
38. Massage room.
39. Rest room.
40. Hallway.

With the knowledge of the therapeutic value of the various treatments employed abroad, why do not the American hospitals grasp the opportunity to relieve our fellowmen? Is it because our medical schools and our teaching hospitals have not awakened to these possibilities? Or have our American medical men some more simple method of treatment?

In my discussions with various medical specialists, they acknowledge the value of equipment and recommend it where possible, especially the

full-length continuous bath or water bed, the hydrotherapy, and baking. In the later hospitals in which I have been interested I have endeavored to set apart certain rooms and reserve them for the medical treatment rooms, having reason to believe that within a very short time the medical men will require equipment commensurate with the needs of their profession.

Fig. 3. München-Schwabing Hospital—Douche room in main bath.

In the new St. Luke's Hospital (Fig. 7), at Jacksonville, Fla., about one-half of the second story of the administration building is set apart for medical treatment. This portion is not equipped, but is ready whenever the demand comes and the funds necessary to equip and maintain it are obtained.

In the plans of the private pavilion of the Royal

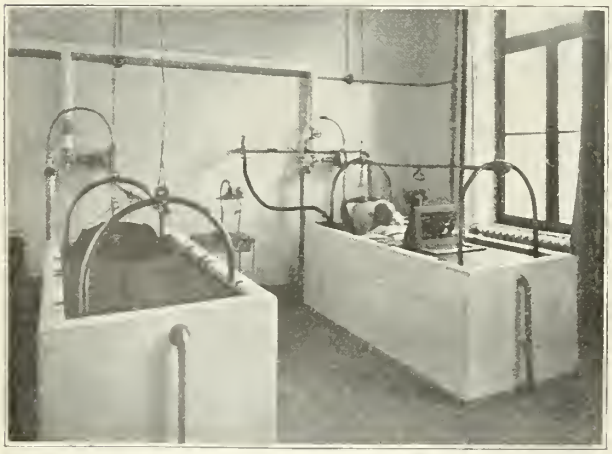

Fig. 4. Water beds (continuous baths) at St. Georg Hospital, Hamburg.

Victoria, at Montreal, a large space is to be set apart for medical equipment, a small psychopathic department, roentgen ray department, hydrotherapy, electric, Nauheim, and continuous baths, and rest and massage rooms.

At the new Ohio Valley General Hospital, at Wheeling, a complete isolation department is built on the fifth floor, entirely isolated from the main hospital by cross fresh-air passages, with separate serving kitchen and sink rooms, airing balcony, etc. Every room is completely equipped

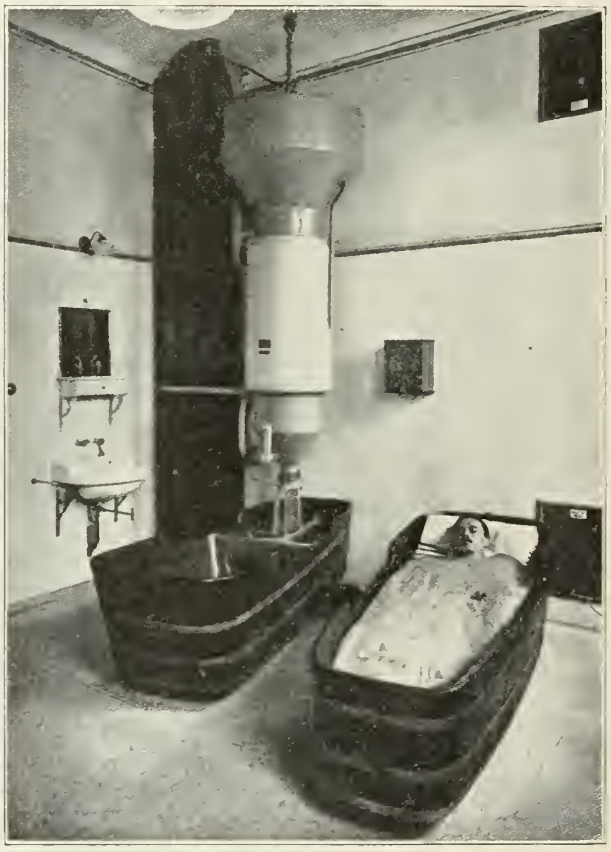

Fig. 5. Sand baths at St. Georg Hospital, Hamburg.

with sinks having elbow faucets, doors without knobs, but with hook handles on the inside for opening with arm or elbow. In this department the individual bath is given in a shallow tub,

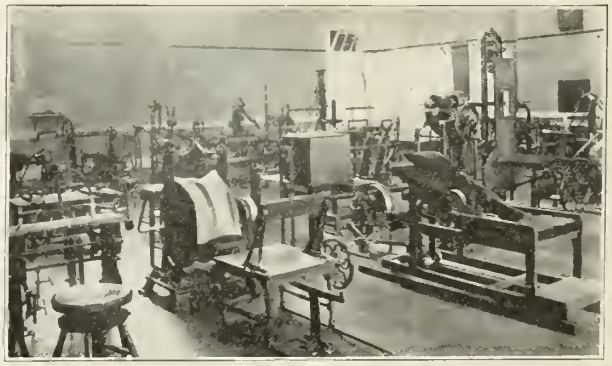

Fig. 6. Zander room at Massachusetts General Hospital, Boston, Mass.

placed on wheels, so that the top of the tub is level with the bed. Floor connection is established with the waste pipe, and the patient is given a spray bath with clean water.

At Mount Sinai Hospital, New York, the physicotherapy department, under Dr. Wolf, is doing splendid work for the relief of many.

The help given to the so-called chronic invalids at the New Robert Brigham Hospital, Boston, by

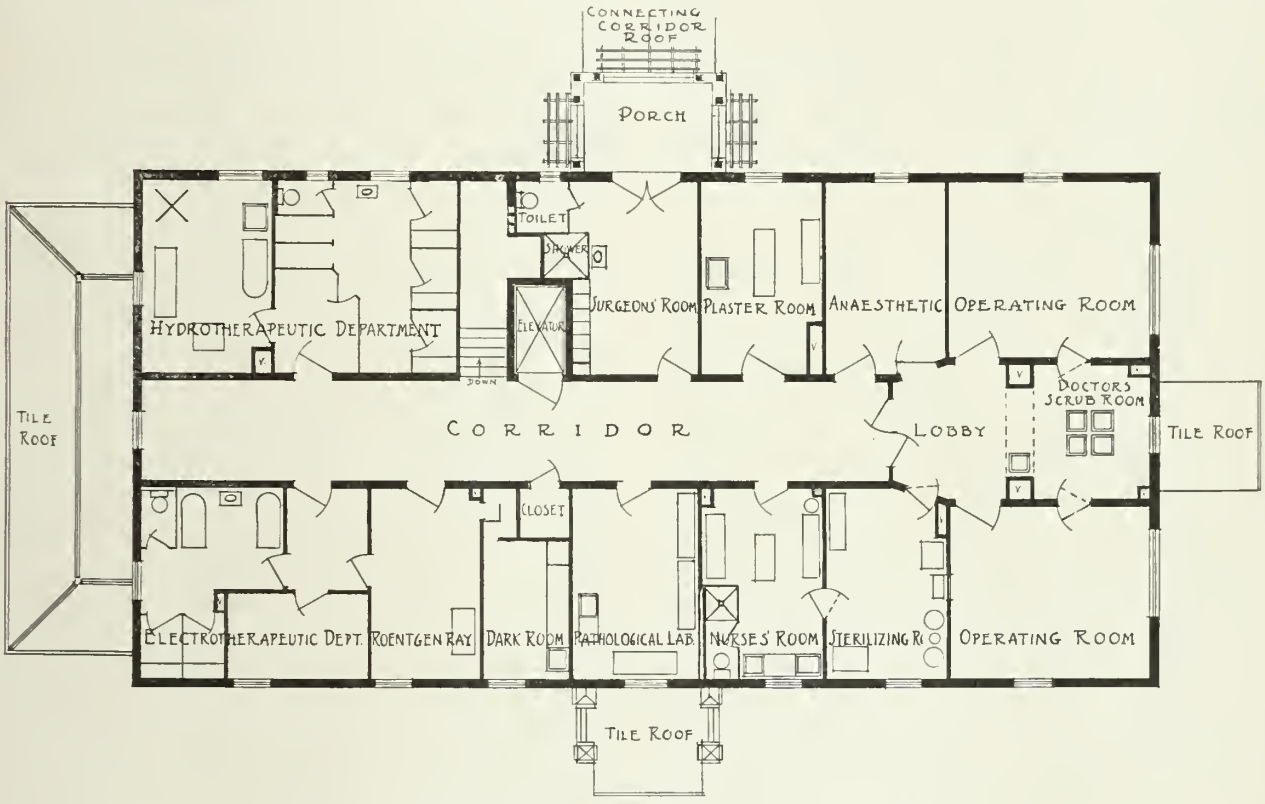

Fig. 7. St. Luke's Hospital, Jacksonville, Fla.—Second floor plan.

scientific treatment is referred to as little short of miraculous.

I have mentioned only a few cases where the medical man is being considered in the planning of new hospital buildings, and I hope the discussion will bring out others and that you will tell us what we should provide.

Preventive medicine and treatment is much discussed. Will not the medical or bath house department, with its many treatment and rest rooms, soon be as important a factor in our modern hospitals as our operating department is today?

HOW AN AVERAGE COMMUNITY CARES FOR ITS SICK.[1]

Amount, Character, and Care of Sickness in Selected Urban and Rural Districts in Dutchess County, New York.

By JOHN R. SHILLIDAY, State Charities Aid Association of New York.

THE story is told of how after the French occupancy of Algiers a census of the country was to be taken according to modern standards. The French officials requested information of an ancient Mohammedan sheik as to the number of inhabitants of his territory, to which the reply was, "Allah alone knows." To the second question, as to how many of them died and of what diseases, was given the same answer, with the addition, "It would be impious to inquire." While we have in this country passed far beyond the standard of the Mohammedan sheik, it would still be proper, if one were asked how much sickness there was, to reply very much in the words of the Algiers official, "Allah alone knows." What is very much needed is definite and reliable information as to the amount and character of sickness in various parts of the country and under various conditions, and just what is being done about it. It may not be presumptious, therefore, to believe that the results of a study of sickness in four towns and part of a city in a typical county in New York State, with no special problems peculiar to itself, may be of interest and value to all stu-

[1]Read at the sixteenth annual conference of the American Hospital Association, St. Paul, August 25-28, 1914.

dents of problems involving the care of the sick and the prevention of disease.

PURPOSE AND METHOD.

At the request of the Thomas Thompson Trust, an organization primarily interested in the improvement of social conditions and actively working in Rhinebeck, Dutchess county, N. Y., and in Brattleboro, Vt., an attempt was made by the Hospitals Committee of the State Charities Aid Association to secure reliable data relative to sickness which occurred in certain selected communities in Dutchess county during a sixteen-months period of 1912 and the first four months of 1913.

A trained investigator was employed to secure, directly from those families in which it had occurred, as full and accurate data as possible concerning sickness, including the medical and nursing service obtained, its efficiency and cost, the need of and demand for domestic assistance in the homes where sickness occurred, and the efficiency with which such demand was met. Detailed inquiry was made into family conditions, including the names of the members of the family, their ages, occupations, general economic status, mental and physical condition. The attending physician was consulted either personally or by letter about each recorded case of sickness. In this way the facts obtained have been checked up, and the medical viewpoint as to the character of the sickness and the adequacy of the care has been ascertained. Only one physician out of fifty-nine refused his cooperation, maintaining that sickness was a private matter of no public concern. The viewpoint of the family of each patient was ascertained as to the treatment received, together with their opinion; if they believed the care to have been inadequate; as to what services, whether hospital or home, would have been necessary to have secured adequate care. The time spent in hospitals, the cost of hospital care, and the time sick and the cost of such illness were also recorded.

It was not always possible to learn the cause of the sickness recorded. The family seldom had any idea of the cause, and was often vague as to the exact duration of the illness. The physicians in the rural sections, especially, were equally vague. Their records were found usually to consist of the number and cost of the calls made, and, if the bill had been met, even these scant data had usually been destroyed. There was little difficulty in securing information from the families, publicity through the local press assisting in that.

FIELD COVERED.

The investigation was made in the towns of Rhinebeck, Stanford, Milan, and Clinton, and in the Fourth Ward of Poughkeepsie. The towns covered (contiguous to each other) are typical rural communities, with a total population of about 7,223.

Stanford is a county town of about 1,520, of whom 700 live in two adjoining villages.

The towns of Milan and Clinton are typical farming sections. Milan has a population of about 893, and Clinton of 1,278. Stanford has one resident physician, who acts as health officer. Milan is without a resident physician, and Clinton has three. In none of these towns is there district or school nursing. As in the majority of rural communities, the water supply is drawn from private wells. A relatively small number of houses are connected with cesspools. The others still have only surface drainage and the old-fashioned privy, with a dug vault.

The population of Rhinebeck town is approximately stationary. The 1910 census shows a total of 3,532, an increase of but 165 over that of 1890. About 1,548 of this population live in Rhinebeck village and about 600 in the village of Rhinecliff. The village of Rhinebeck is given over largely to violet growing. District nursing, maintained by the Thompson Trust, is carried on under the supervision of the matron of Thompson House, but, because of the difficulty in obtaining an efficient woman for such work in the country, school nursing has been, until the winter of 1913-1914, somewhat intermittent since its first introduction into the community in November, 1911. There is close cooperation between the trustees of the Thompson Trust and the county agent for the care of dependent children of the State Charities Aid Association.

In the village of Rhinebeck private cesspools are found in relatively large numbers. The old-fashioned privy vault is, however, still in existence in a number of cases. This is especially important when it is taken into consideration that, although the water supply can be drawn from sunken wells (owned by private corporations) at a distance of about three miles from the village, private wells are still used by a relatively large number of the population.

The village of Rhinecliff is built on a steep slope. There is no system of drainage there, and the water supply is drawn from wells. Street drainage is discharged into the river. In the town outside of the villages of Rhinebeck and Rhinecliff there are the privy vaults and surface drainage which characterize most rural communities.

Poughkeepsie, with a population of 28,500, is the chief center of the western section of the county. The Fourth Ward of this city was selected as being more typical of the city as a whole than

any other one ward. Based on the average increase in population for the last ten years, the population of this ward is approximately 4,580 (16 percent of that of the city). It includes a representative part of the main business section of the city, a wealthy residential section, and a fairly proportionate number of the homes of the poor and of those of moderate means. The ward contains an average number of the colored and foreign population of the city. Poughkeepsie sewage is emptied into the Hudson river. The water supply is drawn from the Hudson river, but there is a filtration plant connected with the system. A district nurse, the only one in the city, is maintained by a private society. This nurse also does nursing for the Metropolitan Insurance Company. A tuberculosis nurse and a babies' welfare nurse are maintained by the local board of health. A nurse (untrained) cooperates with the school physician in working with the school children. The Associated Charities and the Home Missionary Society, as relief agencies, come in close touch with the sick poor. A county agent, supervised by the State Charities Aid Association, is meeting the varied problems involved in the care of dependent children.

Aside from a public tuberculosis hospital of 100 beds and a small hospital maintained by the city in connection with the City Home (almshouse) for the inmates of that institution, the hospitals of Poughkeepsie are private. One has a capacity of 67 beds, one of 12, another of 14, and there are 11 beds available in another—a total general hospital provision of 104 beds.

In February, 1914, an additional hospital was opened for the reception of a small number of patients. The plans allow for a capacity of about 70 beds, not including the provision which will be made for contagious cases; 15 beds will be available for obstetrical cases, and 25 for children. Including these 70 beds, which are assured (and omitting the hospital for tuberculosis), Poughkeepsie will shortly have a total capacity of 174 beds.

In the Fourth Ward of Poughkeepsie and in the town of Rhinebeck, including the two village corporations of Rhinebeck and Rhinecliff, a house-to-house canvass was made to inquire of every family concerning cases of sickness during the period covered. As the time allowed for field work was limited, it was impossible to make a house-to-house canvass elsewhere, and in the towns of Milan and Clinton a family was omitted when a neighbor's statement of "no sickness" in a family could be corroborated without a personal call. Calls were not made at quarantined homes, but all available data were obtained from the neighbors and later checked by the physician who attended the patient. In the town of Stanford, where the inquiry was started, only those families were visited in which it was known that sickness had occurred during the year 1912. A list of these families was secured from the one resident physician, the town and school authorities, and from the churches. Of the methods used the house-to-house canvass is probably the surest and most effective. The method used in the towns of Milan and Clinton is, however, fairly comprehensive, as any sickness of which neighbors would not know in a rural section would probably be of such a nature (venereal diseases, etc.) that the family itself would not report it. Approximately 97 percent of the population was covered in the Fourth Ward of Poughkeepsie, 93.3 percent in Rhinebeck town, and 96.5 percent in Milan and Clinton combined. The total population in these communities, including the Fourth Ward of Poughkeepsie, is about 11,803. Aside from Stanford, with a population of 1,520, where the inquiry was limited to a twelve-months period, and where all the families in which sickness was reported were visited, 2,280 families, 9,853 persons, 96 percent of the total population (10,283), were covered.

"Sickness," for our purposes, has been limited to that which was so serious that it either necessitated or should have necessitated the patient's going to bed or securing medical aid. A slight ailment, such as indigestion, headache, or a light cold, was not taken into account. The international classification was used.

SICKNESS RECORDED.

One thousand six hundred cases of sickness are recorded as having occurred during the sixteen-months period covered by this inquiry. Of these 49 percent were communicable, 42 percent were general medical and surgical cases, and 9 percent were obstetrical. Of the 1,600 patients 19 percent were men, 38 percent were women, and 43 percent were children; 487 cases occurred in the Fourth Ward of Poughkeepsie, 774 in Rhinebeck town, 272 in Milan and Clinton, and 67 in Stanford.

It is not contended that these figures represent the total amount of sickness which occurred within the districts covered during the period named. The investigation, covering, as it did, a period of sixteen months, was begun at the expiration of that period and continued for from three to four months. The population of the territory studied was to a considerable extent shifting. There were a number of families who moved out of a district before they were reached by the investigator and whose records do not appear in the investigator's figures. To some extent their

places were taken by others who moved into the district during the same period. Among the poorer of the population, especially, it often occurred that immediately after a death the family would move out of the house, and in many cases out of the district. In a number of cases a person dying was the last of the family, and the investigator obtained no record either of the sickness or of the death. Also in this as in every community, there was a considerable floating population, casual laborers, and the like, and the records of these it is almost impossible to secure. The number of officially recorded deaths of which record was not obtained by the house-to-house canvass is 54 in the Fourth Ward of Poughkeepsie, 49 in Rhinebeck town, 17 in Milan, and 25 in Clinton. Likewise, the number of officially recorded births not appearing in the confinement cases record of the investigator is 76 in the Fourth Ward of Poughkeepsie, 17 in Rhinebeck town, 6 in Milan, and 9 in Clinton. If these deaths and births were added to the number of cases of sickness of which data were obtained, it would increase the number of cases of sickness 26½ percent in the Fourth Ward of Poughkeepsie, 8 percent in Rhinebeck town, and 21 percent in Milan and Clinton, a total of 16½ percent for the districts covered. The case rate of sickness per 1,000 population in 1912, based on the investigator's figures, would be 80 per 1,000 in the Fourth Ward of Poughkeepsie, 161 per 1,000 in Rhinebeck town, and 63.3 per 1,000 in Milan and Clinton. Or, with the additional data of officially recorded deaths and births, the figures would be 104, 184, and 92 per 1,000, respectively. It will be understood that the case rates per 1,000 population for the respective communities are of value only for the sake of comparison between the separate communities, since they cannot be said to represent the total amount of sickness which occurred.

TIME LOST DUE TO ACUTE ILLNESS.

Among the 1,600 cases of sickness, excluding 5 suffering from infantile paralysis, 15 errors in refraction, 126 confinements, and 15 accidents of pregnancy, there were 987 cases of acute illness, 64 percent of the total number. Among these 987 there was a total of 41,244 days lost on account of illness; 14,375 days of sickness, 35 percent of the total number of days lost, occurred among children from 1 to 6 years; 30 percent of the total number of days lost, or 12,597 in all, occurred among children of school age, from 7 to 14 years.

The loss of 4,125 school days by the 102 children of school age who contracted whooping-cough, of 917 school days by the 74 suffering from measles, of 365 school days by the 16 who had scarlet fever, and of 220 days by 6 typhoid patients, makes a combined total loss for these four contagious and preventable diseases of 5,627 school days, or nearly 29 years of schooling. If the amount of contagious disease among school children were the same for the region not canvassed as for the portion canvassed, there would have been a loss of schooling in the county from these four diseases of 51,150 school days, or about 262 school years.

During the productive period of life, ages 15 to 54, the figures show a loss of 4,983 days by 122 men, an average in each case of 40 days' sickness. For the same age period 186 women were ill 4,838 days, an average of 20 days. This lower average of women as compared with men, a deviation from former experience, is to be explained by the fact that confinement cases are not included. There were 8,001 days lost, or nearly 20 percent of the total, by men and women combined during the ages of 15 to 54. These figures omit 452 cases of chronic illness, 31½ percent, excluded because of the difficulty of securing the facts in chronic cases. Certainly they would add a large loss to that already noted.

CARE SECURED.

Seventy-six percent of the patients recorded secured medical care; 24 percent did not; 66 percent received medical care in their homes, 6 percent in hospitals, and 4 percent both at home and in hospitals; 90 percent remained in their homes during their entire sickness. Of these, 2 percent secured a resident trained nurse, 4 percent secured a visiting trained nurse (only 6 percent in all having the benefit of either resident or trained nursing skill), 5 percent were cared for by a resident untrained nurse, and 12 persons, less than 1 percent, by a visiting untrained nurse. In 2 percent of the homes resident domestic help was secured; in 59 percent some member of the family did whatever nursing was done. The 24 percent previously referred to (26½ percent of the at-home cases) secured no medical care, and of course no nursing care or domestic service of any kind; 42 percent of the trained nursing service secured was resident and 58 percent visiting. Of the untrained service (not including family nursing), 72 percent was resident and 28 percent visiting; 22 percent of the resident service was trained and 78 percent untrained, and of the visiting service 56 percent was untrained and 44 percent trained.

COST OF HOSPITAL AND HOME CARE.

One hundred and fifty-nine cases, or 10 percent of the total number, were treated in hospitals; 99 of these received hospital care only, 60 both home

and hospital care, at a total cost to the patients of about $8,300, of which $4,262 was paid the physicians and $4,035 to the hospitals; 75 percent of the hospital patients paid for their care and 25 percent did not; 73 percent of the patients who remained in their homes paid for medical care to a total amount of over $17,873, an average of $16.90 per patient, a little less than $13,000 of this amount going to the physicians. In 26 cases an average of $104 was paid to the resident trained nurses, in 59 cases an average of $28.50 was paid to the untrained attendants, and in 19 cases an average of $13.43 was paid to domestic helpers.

ADEQUACY OF CARE.

Up to this point we have been dealing with results which involve the recording and compilation of facts. In proposing now to deal with the question of the adequacy or inadequacy of care, we realize there is much room for dispute as to what constitutes adequate care. By "adequate care" is meant that care which results in the patient's recovery when recovery can be expected, and which is of such a character that neither the patient nor the community incurs avoidable risks. Let it be understood that our judgment in this respect is presented only as a judgment, but as one having been made after careful consideration of a great variety of facts touching on all phases of the patients' surroundings and treatment. As stated in the earlier part of this paper, the physician was consulted in each case, the nurse, if there was one in attendance, and also the family. In many cases the data were referred to specialists and their advice secured. It was sought to maintain uniform standards of judgment throughout the whole number of cases considered. Our conclusions are given not as final, but as subject to all the limitations inherent in the methods used.

Of the 1,441 patients who remained in their homes (90 percent of the total number), only 55 percent were cared for adequately, 45 percent receiving inadequate care; 80 percent of the hospital patients were cared for adequately, and 20 percent inadequately, the latter chiefly because of the lack of social service and follow-up work to connect the hospital with the home. In many of these cases the patients returned to homes unprepared for them, so that proper convalescence was impossible. Combining home and hospital care, 42½ percent were cared for inadequately, and 57½ percent adequately.

For the purpose of this study the patients were divided into three economic classes—in one division, those who were able to pay for any necessary service; in another, those able to pay ordinary charges, such as physicians' fees, practical nursing, and ward service in hospitals, etc., but unable to stand a prolonged drain on their income; in the third class, those unable to pay for care of any kind; 81 percent of the patients who could pay for any desired service were cared for adequately, and 19 percent inadequately. Of the patients who could meet ordinary expenses, but could not stand an unexpected or prolonged drain on their incomes, 50 percent were cared for adequately, and 50 percent inadequately. Of those unable to pay, 32 percent were cared for adequately, and 68 percent inadequately. Of the total number of cases inadequately cared for, but 21.3 percent were unable to pay for any care, 14.4 percent could have paid for any necessary service, while the remaining 64.3 percent were able to pay for any ordinary charges, though unable to stand a prolonged drain on their incomes. A consideration of these facts will make it obvious that, while those unable to pay were at a disadvantage as compared with those able to pay, it is still true that there was inadequacy of care without poverty in about 79 percent of those receiving inadequate care.

The time at my disposal will prevent a full analysis or exposition of the reasons for the inadequate care received. A few illustrations will have to suffice. In 30 percent of the measles cases no medical attention was received; no medical care was received in 47 percent of the cases of chickenpox, 35 percent of the cases of mumps, 68 percent of the diseases of the eye and errors in refraction, and in varying percentages in other diseases; 76 cases of measles were not quarantined, and no physicians were present in 22 cases; 5 cases of scarlet fever out of 28 were in quarantine. The records show a varying percentage of the same lack of quarantine in the other contagious diseases. Crowded and unsanitary housing conditions contributed in 23 percent (156) of the cases of inadequate care in the home; ignorance and low grade mentality in another 7 percent (47) of the cases treated at home.

The character of the medical service available in one rather isolated section is shown in the following story:

When George L., 7 years old, first complained of being ill, his mother telephoned to a physician who lived about one mile distant, asking him to call immediately. The physician asked the mother to describe the child's symptoms, which she did to the best of her ability. The doctor then said the child was suffering from indigestion, and told her what to do. She followed the instructons, but the child became worse. Mrs. L. telephoned twice more, asking the doctor to call, and each time was told that the child was suffering from indigestion and that medical attention was not necessary. At the end of a week George was very much worse, and the family decided to consult a different physician. This doctor diagnosed the case immediately as

pneumonia. George recovered, though he was critically ill for three weeks, during which time his mother and father, who stayed home from work most of the time, did the nursing and housework.

A failure to realize the danger of infection to which the patient's family is subject is characteristic throughout the rural sections in which this inquiry was made:

The physician who attented 7-year-old Hazel in March, 1912, for measles said that at that time she was in incipient stage of tuberculosis. He did not see her again, however, until May, 1913, when he thought she had improved under the outdoor treatment which she had been taking under the supervision of her mother. The family could not afford a special diet for Hazel; the home is crowded (seven people living in eight small rooms), and Hazel sleeps with two of the other children. The mother has neither the time nor intelligence to "supervise" treatment of any kind. Two children in the family were still-born, a 24-year-old boy has "chronic asthma," and in 1897 a 5-year-old boy died from "quick consumption" after a three-weeks' sickness.

The disastrous effects resulting from inefficient medical care and the lack of skilled nursing are shown in the following story:

Mr. K. was taken sick in June, 1912. The physician who was called in stated that he had been poisoned in some way, but that there was no danger of the rest of the family becoming infected. A married daughter came home to help with the nursing and housework. Mr. K. became worse, and, when the daughter became seriously ill with what appeared to be the same disease, the family called in a different physician. This physician diagnosed both cases as erysipelas. Mr. K.'s 32-year-old son also became infected. The disease was too far advanced when the second physician was called in to do anything for Mr. K., who died. The rest of the family recovered.

Here are instances where the families were without necessary care:

Carl R., a heavy drinker, has suffered for two years with a "chronic bronchitis." His wife is of low grade mentality. Of the six children, three (Ruth, 13 years old; Hazel, 12 years old; and Gertrude, 10 years old) are "backward" in school. Ada, 8 years old, has never gone to school. For six years, ever since she was 2 years old, she has been paralyzed from the waist down. She wiggles about the room on her arms with inconceivable rapidity, dragging her limbs. Theodore, 4 years old, is "sickly," and throughout December, 1912, and January, 1913, was in a jaundiced condition. A 2-year-old baby is subject to spasms. This family lives in four dirty rooms. A small toilet room containing a filthy flush closet opens directly into an unventilated bedroom. No member of the family has received medical attendance, and it was therefore impossible to obtain an accurate diagnosis of their condition.

Amelia F., whose story follows, was found in a prostrate and dazed condition in bed in the home of Emmy G.:

Mr. G. is feeble-minded and a chronic alcoholic. "Emmy" is a low-grade defective, and there are three children at home all under school age. Mr. G. is one of three men with whom Emmy is known to have lived illegally. The family have six filthy rooms. One slightly cleaner than the others is rented to Amelia F., whose stepfather boards her here, as he cannot afford to pay more than $3.00 a week for her care and has been unable to find quarters for her elsewhere. Amelia has been in bed practically continuously for five years, and her present care is characteristic of the care she has received during this entire period. She has had no medical attendance, and therefore no diagnosis has been made of her condition. She is unable to leave her bed, eats practically nothing, is hysterical, in a constant terrified condition, and at the time of the inquiry was too weak to talk. Her stepfather, a farm laborer, comes to see her once a week, at which time he bathes her, cleans up her room, and does some cooking for her. When he asks "Emmy" to cook any particular food for his daughter, she cooks nothing else but that until he comes again, so that any suggestions are practically useless.

Martha, 8 years old, was first diagnosed as having infantile paralysis on September 9, 1912. She had been sick for one week previous to this time, but a doctor had not been called in. For two weeks following, the physician called daily and then twice a week for a short time. From October, 1912, to January, 1913, she was in a hospital, but the physicians there could do nothing for her, and since January, 1913, she has been in her own home. She is unable to use her legs, but is otherwise apparently healthy. Her father, a farm laborer, is an intermittent drinker and shiftless. Her mother was pictured by the attending physician as being in "poor health." She is now in a very nervous condition, and has been treated at various times for nervous prostration. The nine people making up this family—man, wife, six children, and the man's 13-year-old brother—live in five rooms, where there are three beds and one small cot. The house is in a filthy condition, and is practically without ventilation. Martha, her mother, and baby brother sleep in one bed. A 6-year-old boy and his 13-year-old uncle, who works as a farm laborer, sleep in the second bed. Ruth, 10 years old; Marie, 4 years old; and Reginald, 2 years old, sleep in the third bed. The man sleeps on the cot. The mother would have all she could do to care for her home and children if conditions were normal, and she has more than she can do as things are. Martha, who was in the second grade when she left school, can neither read nor write, and no attempt is being made to teach her in any way. She sits in a child's express wagon from early morning until time to be put in her third of the bed at night.

When Sam K. is drunk, he beats up his "woman" (Mary O.) and six children impartially. The family lives in a filthy three-room ramshackle building. One room is on the ground floor, and the two small adjoining bedrooms on the second floor are accessible only by rickety steps on the outside of the shack. Mary O. is not normal mentally. She last heard of her legal husband when he was in jail, where he had been put for beating her when he was intoxicated. She "thinks" she had two children by Mr. O., but is not sure, and, if she did, they are probably with Mr. O.'s people. She hadn't "thought of them" for some time, so could not recall their ages. She has no idea of her own age or of the children's who are with her. (It was learned incidentally that Mary O. had once been in a state asylum for the insane.)

The following two illustrations show the dire effects of lack of social service organization to "follow-up" the discharged patients:

Annie M. was in the Hudson River State Hospital suffering from "dementia precox" for six months. At the

end of that time she was dismissed and was apparently normal mentally for five months. From March, 1912, until some time in Lent, 1913, she was again mentally deranged, but her family refused to send her back to the asylum. She succeeded several times in getting away from her home, improperly clad. The home care throughout was most inadequate. Her father is a heavy drinker. A 20-year-old sister, described by the neighbors as "not bright," is known to be out late at night, to keep "fast" company, and is supposedly immoral. Annie returned from the hospital to this environment, and no attempt has been made to supervise her or keep her under observation in any way. Neighbors say she is with her sister on all possible occasions.

George W. is a patient in the Hudson River Asylum, in which his sister died. His wife, 41 years old, does day work to support four children. A fifth child, now 18 years old, has been in the Rome State Custodial Asylum for twelve years. A 16-year-old boy, apparently normal, works as a farm hand, earning $10 a month and his board. A 14-year-old boy is also apparently normal, and on Saturdays works on a dairy farm, so that he can contribute $1 a week to the family income. Edna, 12 years old, is unmanageable at home. She refuses to attend school and stays out late at night, and her mother suspects that she has had immoral relations with some of the boys with whom she associates frequently. Mrs. W. has tried having the girl stay with a family in the village, where she was supposed to help with the housework after school hours, but it was impossible for this family to do anything with her or to control her actions in any way. Mr. W.'s sister was a patient in the Hudson River State Asylum at the time of her death.

No attempt will be made in this paper to map out a program for the correction of such evils as have been disclosed. Our present purpose is to give you the findings of this study for what they are worth, with the thought that other communities may be encouraged to study their own facilities and results, and gain much more than we have been able in this first effort.

SUMMARY.

It was found that 49 percent of the sickness reported was communicable; that 41,244 days were lost on account of sickness by 987 persons, an average of 42 days each; 35 percent of this was among children from 1 to 6 years of age and 30 percent among children of school age, 7 to 14; 37 percent of this was on account of four contagious diseases; 20 percent of the total number of days lost on account of sickness was during the economically productive period of life, from 15 to 54. This 20 percent, in our judgment, is small in this community because of the lack of general industrial development. The figures of our study show, also, that 24 percent of the total number of persons sick did not receive medical care; 2 percent of those who remained at home (90 percent of the total number) were cared for by a trained nurse in their homes; 4 percent received the care of a visiting trained nurse, making 6 percent in all who had the benefit of trained nursing service; 59 percent of the nursing that was done was by members of the family. Our study of the case histories—and by this we mean to express opinions, not finalities—shows that 45 percent of the cases treated in their homes received inadequate care, that 20 percent of those receiving hospital care were treated inadequately, and that, while the economic condition of the sick is reflected in the inadequacy, it cannot be explained by poverty alone, since nearly 79 percent of those receiving inadequate care were above the poverty line.

A study of individual cases of sickness discovered shows many shocking instances of neglect, of unnecessary and indefensible suffering and misery. The health work throughout Dutchess county is unorganized. Contagious diseases have spread in the rural districts, with little effort to check the infection. There is practically no connection between the hospital and the home. There is no hospital provision made for the care of contagious and communicable cases other than the tuberculous; none for the care of early psychopathic cases or of alcoholics, and until recently there had been no separate provision for the care of children. No adequate provision is made for the care of feeble-minded and epileptic.

The medical inspection of school children is most inefficient, and the after-care which such inspection should necessarily involve is practically never attended to—at least not in the rural sections. Rhinebeck town is exceptional in this respect, and, although the school nursing has been intermittent until this last year, the importance of the work is recognized and continuous effort is being made to meet the problem presented.

Efficient medical attendance, such as is necessarily involved in any plan for providing adequate care for the sick, is not always available. Trained nurses are secured from the various centers in which they are registered—Poughkeepsie, Brooklyn, New York, Kingston, and Albany—but no attempt has been made in the county to organize the untrained service, nor to develop systematic means of locating the uncared for sick.

The need of "family rehabilitation" work, in connection with the adequate care of the sick and the prevention of disease, becomes especially important when it is considered that the education of the community in health matters cannot progress until in many cases the family has been built up. Likewise neglected disease leads to poverty, dependence, and often to delinquency and crime. In the city of Poughkeepsie the Associated Charities is working to prevent family dependence and deterioration, and the county agency for dependent children, under the super-

vision of the State Charities Aid Association, is showing the need for similar work throughout the county.

The rehabilitation of the family, dependent as it is on the adequate treatment and prevention of disease, is likewise aided or retarded by the success or failure of other social institutions in measuring up to the social needs of the community. The local justices of the peace clearly fail to meet these needs. It seems of the utmost importance, therefore, from this point of view, that more adequate methods be devised by the courts for handling cases involving the welfare of the family. The establishment of a county juvenile court and the organization of an effective county probation system would afford more adequate legal machinery than now exists for dealing with such court cases. A city probation officer has since been appointed in Poughkeepsie, and in July, 1914, one was appointed in the county at large.

Recent legislation promises good results. Following the recommendations of a special public health commission, legislation was enacted which greatly extended the scope and equipment of the state department of health. Among the newer agencies created was the Public Health Council, with broad powers, which include that of establishing a sanitary code for the state outside of New York City. There was created also a system of sanitary supervision by district sanitary supervisors for each of the twenty districts into which the state was divided (cities of the first class were excluded). These supervisors will cooperate with the local health officers and act as the representatives of the state commissioner of health in securing within their districts the enforcement of the provisions of the public health law and the sanitary code. Power was given to the commissioner of health to employ public health nurses and assign them to any district in the state.

This new machinery is in the process of organization, and the sanitary supervisors are about to be appointed. Time must be allowed for the working out of any improved methods.

The importance of the findings of the house-to-house canvass of selected districts of Dutchess county lies in the fact that there is every reason to believe that the amount of inadequately cared for sickness discovered is typical of what may be expected to be true of every similar community throughout the county. Here are normal small city and country communities in normal times—no unusual epidemics, no extraordinary social or industrial conditions—during a period shown by reported deaths, reported cases of contagious disease, and the unanimous testimony of physicians to have been a "light year" for sickness, and yet we find that in these typical communities under favorable conditions, uncared for sickness and neglected subnormal lives challenge us from our self-complacency to ask, Why?

Some may conclude that Dutchess county is one without resources, and, therefore, unable to meet its own problem for lack of money. On the contrary, it is a county of more than average wealth. It is the seat of Vassar College, one of the most advanced institutions of learning for the education of women. Among its residents are some of the wealthiest families of the state, large endowments are utilized within its borders, the Thomas Thompson Trust and other funds are used for charitable, educational and health purposes. All this points, not to a lack of resources, but to a failure of the people to realize the actual conditions obtaining around them, and to an absence of effective organization by which such conditions may be ascertained and the remedies applied.

Our justification for presenting the findings of a study made in a New York county is that it seems to illustrate what is probably a general condition and not a purely local situation. If we were to hazard a guess, we should say that Dutchess county is above the average in its care of the sick, as it is in wealth and resources.

TABLE I.

Population, Percentage Covered, Total Cases, and Sickness Rate per 1,000 of Population in Selected Districts.[1]

	Fourth ward.	Rhinebeck town.	Milân and Clinton.	Total.
Population	4,580	3,532	2,171	10,283
Total number of families	1,065	855	463	2,383
Number of families not at home	30	57	15	102
Percentage of families covered	97.1	93.3	96.7	95.7
Population covered	4,451	3,306	2,096	9,853
Percentage of population covered	97.1	33.3	96.5	95.9
Total cases of sickness[1]	487	774	272	1,533
Cases of sickness, 1912	355	533	139	1,027
Cases per 1,000 population, 1912[2]	80	161	66.3	104

[1] 67 cases in town of Stanford omitted.

[2] Cases per 1,000 of population indicated only for purposes of comparison between localities, as data do not include all cases of sickness occurring in district covered. See context under "Sickness Recorded."

TABLE II.

Classification of Recorded Sickness by Diseases and Locality.[1]

	Diseases.	Fourth Ward of Poughkeepsie.		Rhinebeck village.		Rhinecliff village.		Rhinebeck town.		Milan.		Clinton.		Stanford.		Total.	
		1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
1	Typhoid fever	6	..	14	3	..	..	1	1	4	..	..	..	..	..	25	4
2	Malaria	13	1	2	..	1	..	1	..	..	1	..	..	..	..	17	2
3	Measles	5	3	3	1	7	44	5	23	18	33	..	14	3	..	41	118
3a	German measles	..	9	..	..	..	7	..	..	..	1	..	..	..	..	..	17
4	Scarlet fever	18	3	1	..	..	1	1	4	..	..	..	..	..	..	20	8
5	Whooping-cough	10	2	78	2	9	2	57	19	..	39	7	4	..	..	161	68
6	Diphtheria	1	2	..	..	..	2	..	..	..	..	..	..	..	..	1	4
7	Influenza (la grippe)	12	18	..	18	1	..	4	2	1	..	2	2	1	..	21	40
8	Erysipelas	1	..	..	..	..	..	2	3	..	..	..	..	1	..	4	3
9	Chickenpox	9	7	..	3	..	..	3	10	5	1	2	2	..	..	19	23
10	Mumps	4	16	1	3	..	..	..	5	..	3	..	2	..	..	5	29
11	Infantile paralysis	1	..	..	..	2	..	..	..	2	..	..	..	..	..	5	..
12	Tuberculosis (pulmonary)	10	..	5	..	1	..	2	..	3	..	2	..	1	..	24	..
	Tuberculosis (other forms)	3	..	1	1	..	..	..	..	..	..	..	..	..	..	4	1
13	Cancer and other malignant tumors	11	..	..	..	1	..	4	..	..	..	6	..	1	..	23	..
14	Syphilis and gonorrhea	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
15	Acute and chronic rheumatism	9	4	16	3	2	2	7	..	6	1	2	1	2	..	44	11
16	Diabetes	4	1	1	..	..	..	2	..	..	..	..	..	..	..	7	1
17	Alcoholism	10	..	8	..	5	..	3	..	3	..	3	..	4	..	36	..
18	Anemia, pernicious and secondary	7	3	1	1	5	..	..	1	2	..	1	..	..	..	16	5
19	Meningitis, simple and cerebro-spinal	..	..	1	..	..	..	1	..	..	1	..	..	1	..	3	1
20	Cerebral hemorrhage—apoplexy	3	..	3	3	..	..	..	2	2	..	..	1	2	..	10	6
21	Organic nervous diseases	5	3	4	3	1	2	2	..	..	..	2	1	2	..	16	9
22	Paralysis	5	..	..	..	2	..	1	..	..	..	..	..	..	..	8	..
23	Epilepsy	1	..	1	..	1	..	1	..	..	..	1	..	..	..	5	..
24	Insanity	5	..	4	..	1	..	1	..	..	..	..	..	3	..	14	..
25	Other functional nervous diseases[2]	9	2	4	..	4	1	3	1	1	..	1	1	1	..	23	5
26	Diseases of the eye	8	..	4	..	2	1	12	..	1	..	4	..	..	..	31	1
27	Diseases of the ear	3	2	1	6	..	..	1	..	..	..	2	..	..	..	9	8
28	Diseases of the heart	9	..	4	..	2	..	5	..	..	..	1	1	2	..	23	1
29	Diseases of the arteries	4	..	..	..	..	..	1	..	..	..	1	..	..	..	6	..
30	Diseases of veins, lymphatic system, etc.	1	..	1	2	1	..	1	..	..	..	..	..	..	..	4	2
31	Bronchitis, acute and chronic	8	3	3	5	2	..	5	1	2	..	..	..	..	..	20	9
32	Pneumonia	7	4	10	1	2	2	2	1	2	2	1	1	5	..	29	11
33	Broncho-pneumonia	..	2	1	1	..	1	..	..	..	1	..	..	..	..	1	5
34	Asthma, pleurisy, diseases of nose, larynx, and pharynx	13	9	14	1	1	..	4	..	3	..	..	..	2	..	37	10
35	Tonsils and adenoids	12	7	13	6	2	..	5	1	1	..	4	4	..	..	37	18
36	Diseases of the stomach	8	6	8	1	2	..	2	..	3	..	1	2	4	..	28	9
37	Diarrhea and enteritis	2	..	1	2	..	..	..	..	..	..	..	..	..	..	3	2
38	Hernia, intestinal obstructions	3	..	2	..	1	..	1	..	..	..	..	..	..	..	7	..
39	Appendicitis	14	..	3	..	2	..	5	..	..	..	..	..	1	..	25	..
40	Other diseases of digestive system	..	..	1	2	..	..	..	..	..	1	..	..	..	..	1	3
41	Diseases of the liver	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	1
42	Nephritis, acute and chronic	6	..	4	..	1	..	3	..	3	..	..	..	1	..	18	..
43	Diseases of g. u. system, male	..	..	5	1	..	..	2	..	1	..	2	..	3	..	13	1
44	Diseases of g. u. system, female	18	2	8	2	1	..	1	..	..	..	2	..	5	..	35	4
45	Confinements	32	14	16	8	7	1	12	9	5	4	5	5	8	..	85	41
46	Puerperal septicemia, accidents of pregnancy and of labor	4	1	4	2	..	..	1	1	..	..	..	1	1	..	10	5
47	Diseases of the skin	4	1	3	1	..	1	2	..	..	..	2	..	..	..	11	3
48	Malformation	4	..	2	..	..	..	1	..	1	..	2	..	..	..	10	..
49	Diseases of early infancy	1	..	..	..	..	..	..	..	..	..	..	2	..	..	1	2
50	Senility	8	..	14	..	4	..	6	..	4	..	..	..	9	..	45	..
51	Diseases of bone, joints, etc	1	1	..	..	..	..	..	..	..	..	..	..	1	..	2	1
52	Fractures and other accidents	10	1	5	2	2	..	4	2	1	..	1	1	2	..	25	6
53	All other diseases	13	4	3	..	..	2	2	2	1	..	5	..	..	..	24	8
	Totals	355	132	278	84	75	69	180	88	77	88	62	45	67	..	1094	506

TABLE III.

Summary of Medical Care Secured.

Medical care		1,217 (76 percent)
At home	1,058	
In hospitals	101	
At home and in hospitals	58	
No medical care (remained at home)		383 (24 percent)
		1,600

[1]Data for 1913 are for first four months only.

[2]Defectives—treated separately.

TABLE IV.

Number of Cases of Chronic and Acute Illness, and Number of Days Lost and Average Duration Due to Acute Illness, by Age Periods.[1]

Age.	No. cases.	Chronic.	Acute.	Days lost due to acute illness.[1]	Average days' duration acute illness.
1-6	293	24	269	14,375	53.4
7-14	349	44	305	12,597	41.3
15-19—Men	33	10	23	1,031	44.8
Women	22	7	15	366	24.4
20-29—Men	57	14	43	1,249	29
Women	68	19	49	1,444	29.4
30-39—Men	45	23	22	707	32.1
Women	89	31	58	1,592	27.4
40-54—Men	60	26	34	1,996	58.7
Women	112	48	64	1,434	22.4
55 plus—Men	120	79	41	1,198	29
Women	191	127	64	3,253	50.8
Total	1,439[2]	452	987	41,244	

TABLE V.

Summary of Nursing and Domestic Service Secured.

Remained at home		1,441 (90 percent)
Secured no care	383	(.265 percent)
Secured resident trained nursing	31	(.022 percent)
Secured visiting trained nursing	53	(.037 percent)
Secured resident untrained nursing	77	(.053 percent)
Secured visiting untrained nursing	12	(.008 percent)
Secured resident domestic help	32	(.022 percent)
Secured visiting domestic help	1	(.001 percent)
Secured family nursing	852	(.591 percent)
	1,441	

TABLE VI.

Summary of Hospital Care Secured.

	Fourth Ward.	Rhinebeck town.	Milan, Stanford, Clinton.	Total.
Number of men patients	24	22	6	52
Number of women patients	39	46	10	95
Number of children patients	4	12	3	19—166
Medical cases	27	30	5	62
Surgical cases	36	31	12	79
Obstetrical cases	1	12	1	14
Psychopathic cases	3	7	1	11—166

TABLE VII.

Adequacy of Care by Total Number of Patients.

	Home care.	Hospital care.	Total.
Total number cases	1,441	159	1,600
Number patients who received adequate care	793	127	920
Number patients who received inadequate care	648	32	680
Percent adequate care	55 percent	80 percent	57½ percent
Percent inadequate care	45 percent	20 percent	42½ percent

TABLE VIII.

Adequacy of Care by Locality.

	Fourth Ward.	Rhinebeck town.	Stanford, Milan, Clinton.	Total.
Total number cases	487	774	339	1,600
Total number adequately cared for	282	481	157	920
Total number inadequately cared for	205	293	182	680
Percent adequate care	58 percent	62 percent	46 percent	57½ percent
Percent inadequate care	42 percent	38 percent	54 percent	42½ percent

[1]Number of days lost due to chronic illness not tabulated.

[2]Does not include 5 patients suffering from infantile paralysis, 126 confinements, 15 accidents of pregnancy, and 15 eyes—errors in refraction.

GROUPING OF MEDICAL MEN FOR OFFICE AND HOSPITAL PRACTICE.

The Great Middle Class Cannot Pay Consultation Fees, and Therefore Cooperation in Diagnosis and Treatment Is Logical Result—A Successful Illustration.

By P. E. TRUESDALE, M. D., and R. W. FRENCH, M. D., Fall River, Mass.

THOROUGHNESS in methods of diagnosis and treatment is the watchword of today. To attain this, the grouping of specialists offers an example of the forecast of the development of medical practice. Cooperation of medical men, placed in convenient, harmonious, and reciprocal relations, offers the only logical way to make the vast and complicated range of medical knowledge fully serviceable to the individual patient. In this way only can adequate service be rendered without waste and for moderate fees, such as the great middle class can reasonably afford to pay.

Nowadays patients may be divided into three classes. First, the charity patients, who are sent to the general hospital, and there receive, with little or no cost, all the laboratory work that is necessary, together with the advice of all the specialists that may be desired. Second, the well-to-do patients, who receive expert service, but who can afford to pay consultation fees to the various specialists for their work. Third, the largest class of patients, who do not wish to accept charity, but who cannot afford to pay consultation fees to numerous specialists. These last patients, in general, are today receiving the least satisfactory treatment.

The plan of grouping physicians as it is being worked out in Fall River, Massachusetts, is done chiefly to give patients of moderate means access to specialists in the various branches of medicine and surgery, and to keep the charges well within their financial ability. A centrally located building, incorporated under the name of the Truesdale Clinic, and designed for the purpose, is now established for the cooperative study of patients. The first two floors are devoted to offices and examining rooms, with waiting rooms, and a main office at the entrance, where information may be had and where clerical work is done. On the third floor is the x-ray department, a chemical and bacteriological laboratory, an operating room for minor cases, a sterilizing room, two recovery rooms, and two offices.

The secretary's office serves as a record room, where all data relating to patients is kept on file. Here, too, is kept a card index system of the diagnoses recorded on the history cards, which facilitates the grouping of diseases for ready reference. This department has also a system of following up hospital patients, to acquire definite knowledge of end results of treatment.

On the second floor is the library, of which the secretary has charge. It is her duty, as librarian, to keep members of the clinic informed on all recent medical literature which concerns the individual specialist. She maintains a filing system for all reprints received and a reference system to current medical and surgical publications.

Most of the patients come to the office building and ask to see a particular physician. If the case is within his province, he treats the patient, who then leaves without seeing anyone else. If the case is one which can be more satisfactorily cared for by another physician, the patient is then transferred. Many of the cases are simple and quickly disposed of; but, on the other hand, there is a relatively large number which demand an exhaustive investigation in order that a safe degree of accuracy in diagnosis may be attained before treatment is undertaken. In these cases the patient has x-ray examination, laboratory tests, and consultations which may be deemed essential until a diagnosis is established.

The business management of a clinic of this character is not a happy part, but it is nevertheless a very essential one. It would simplify matters if each doctor were working on a salary, paid by the corporation. But this arrangement has two serious objections: first, that the salaries would have to be so large that it would not be possible to employ the required number of specialists; and second, that each physician in the building already has a practice of his own, which he is loath to release. Therefore, it seemed best that each man should keep his own accounts separately and make his own collections. When a physician in the clinic sends his patient to one or more specialists for consultations, etc., the fee is adjusted by the physician who starts the case, since he has a more intimate knowledge of the patient. The bill is itemized, so that the patient knows how much he is paying for each examination. It is then sent by the clinic, and, when paid, the various amounts are credited to the physicians to whom they are due. This is more satisfactory to the patient than receiving several different bills, and generally at different times.

Rents in the building vary according to position and size of the rooms. The income from this source is designed to pay for taxes, light, heat, maintenance, supplies, office attendants, and interest on the investment.

The clinic is associated with two hospitals intended to cover the requirements of all classes of patients: St. Ann's Hospital, a religious institution, located in a busy section of the city, which provides wards and private rooms; and the Highland Hospital, private, designed as a modern hospital and located on an ideal site remote from the built-up section of the city.

The physicians and surgeons in the clinic are on the staffs of both hospitals, and patients needing hospital treatment are sent to one or the other of these institutions. All evidence bearing on the case accompanies the patient to the hospital.

Our clinic is young, and our working plan is not yet ideal. Nevertheless, it is so obviously logical, and better than the isolated method of office practice, that the plan can no longer be considered an experiment.

The hub of our work involves a heart interest on the part of every man connected with it for the success of its functions and the achievement of higher standards.

NEW ERA FOR THE GENERAL MEMORIAL HOSPITAL.

Fine Endowment and Reorganization Will Permit Splendid Institution to Broaden Its Work in Cancer Research, Prevention, and Possible Cure.

By MRS. ANNA MEREDITH LAWSON, Emeritus Superintendent.

ABOUT the year 1884 two women, deeply interested in the subject of cancer, conceived the idea of building a hospital to be devoted to cancer, its treatment and study. These two pioneers in this work, Mrs. John Jacob Astor and her cousin, Mrs. George B. Cullun, by their generous gifts made possible the building of the Cancer Hospital. Many influential names were added to this roll of honor, and on December 7, 1887, the doors of the New York Cancer Hospital were thrown open to the sufferers from the dread disease, and it became a factor in the cause for which these noble women had striven.

Looking backward over the old records, one finds such names as James B. Hunter, Brayton Ball, William T. Bull, George F. Shrady, Francis P. Kinnicutt, and Frank Hartley of the medical staff. All gone to reap the reward of devotion to their fellow-men. We find also Clemens Cleveland and Henry C. Coe, who are still ready with their skill.

The first president, Mr. John R. Parsons, is at the helm, actively engaged in furthering the good work. The prejudice against the word cancer, however, was so great that in 1899 it was deemed best to change the title of the hospital so that by special legislative act it became the "General Memorial Hospital for the Treatment of Cancer and Allied Diseases." The scope of work was largely, almost entirely, surgical, but, because of the pressing need of funds, diseases other than malignant were accepted in the private rooms and certain wards if susceptible of surgical interference.

Quite recently Dr. James Douglas has endowed the institution most generously, with, however, the distinct understanding that the scope of work shall be entirely along the lines of cancer research and investigation, and that it be affiliated with Cornell University Medical Department. The Dean of Cornell will in the future be a member of the board of managers of the hospital and a trustee of the fund. The active surgical and laboratory workers will also be connected with Cornell. This has given a new impetus to the important work, and has brought in its train many changes—changes on the boards of both managers and medical staffs. A new medical board was appointed, and by its affiliation with Cornell the doors to the best methods should stand wide open. At least it has at last a means to an end, for, without the generous aid of those who have, no such enterprise can exist.

The General Memorial Hospital has now a large quantity of radium, and by January will have much more. Its roentgen-ray plant is second to none, and it takes a sufficiently open-minded attitude toward the cures, or would-be cures. Surely some results will crown these efforts, and no matter whence will come that long-sought-for conqueror, credit will be given where honor and credit are due. The watch words are recognition and prevention. These make up the strength of the effort being made. Good luck, then, to the General Memorial and its workers; may its old aims along new lines extend, and its beneficence be felt throughout this and the ages to come. It is a crusade—a crusade of individuals for individuals. It is work for mankind and for womankind.

Think of the splendid aids—surgery, radium, roentgen rays,, serums, science in its many forms, and the intelligence of the times in which we live, and which is the birthright of every man, woman, and child.

This great work owes a quintuple duty—to the surgeon who gives his skill, to the scientist who

gives his time, to the philanthropist who gives of his abundance, to our neighbors, to ourselves.

One of the most generous donors to the cause of cancer always alludes to it as the dark secret. Will it remain dark, and for how long? The book of Genesis tells us, "He said, let there be light, and there was light." It is for us to use the means God has given us, and, fortified by faith and His help, to go forth to fill by every known means the "lamp of science," that it may light the pathway to a recognized and established method of cancer control.

Cancer! cancer! We have all been brought face to face with the awful dread the mere word calls forth. In whispers we are told that this friend or that acquaintance "died of cancer." In our own households its terrible presence may have been felt, and yet the search goes on for the cure that is not yet. Surgical effort, science, all have striven, are still striving, to throttle this grim destroyer, who is almost seen to smile and reach out for the next. And whom? Shall it be a sorrowful regret for the friend who has passed, or shall it be one of our own—some one nearer and dearer than our own life?

The General Memorial Hospital, I think, has struck the keynotes—investigation, research. It is sending out its force to teach the world what to do; it is making the effort to impress the men who are educating and bestowing degrees on future savants to recognize cancer when they see it. Better the doubt than the error, and, if embryo physicians and surgeons were made to go through the wards of malignant cases before their degrees were recommended, it would be admirable. Of course it is an insidious disease, but a broader medical efficiency would aid the cause, and this is one of the many things Cornell proposes to do.

For laymen and laywomen another course is marked—one of example, of making those comprehend the importance of having any unusual symptom, a growth, no matter how small, examined by the best medical man they know, and, if he says cut, then take his advice. Make those with whom you come in daily contact—friends, servants—fully aware of the meaning of this safeguard, and insist that cancer is not a disgrace. It is no respecter of persons or places—palaces and slums are both visited by this most impartial destroyer. Tear away the veil of secrecy, look on it as a dispensation of an all-wise Providence, and treat it intelligently.

It is a difficult and expensive problem to run well a hospital for cancer patients. The labor question is a burning one. Only those really interested or highly paid will give their services. The community at large has always regarded the disease with horror, as if in some way it was a personal disgrace. To level this prejudice is a step in the line of progress, and I shall hope to see the open door bring about results.

An American Hospital in Europe.

The Boston *Medical and Surgical Journal* contains an interesting report of the American hospital relief ship Red Cross that reached Rotterdam, Holland, October 6. The expedition consisted of six surgeons and twenty-five nurses, who left immediately by train for their respective destinations in Austria and Germany. One unit is assigned to each country. The two units recently landed in France have been stationed at Mont-de-Marsan. Various churches in the United States contributed on Peace Sunday, October 4, $5,661. The total New York fund, inclusive, makes a total of $225,187, and on October 9 the total of the American Ambulance Hospital (Neuilly) fund reached $69,931. Considerable funds have also been contributed to the Belgian relief fund and to the Prince of Wales national relief. The American Ambulance Hospital at Neuilly (Paris) is apparently winning golden opinions for efficiency. Sir Frederick Treves, Bart., sergeant-surgeon to King George, describes his impressions of the American Hospital at the Lycee Pasteur at Neuilly as being an institution of which the Americans have reason to be proud, as it is the best of its type in Paris. The number of beds is 300; there were 370 patients, of whom 162 were British. The staff consists of fifteen doctors, seventy-five fully trained nurses, and others, making a total of 180. The great difficulty in the medical aspect of the war is the question of transport. More ambulance trains are being provided, but they will not be immune from the risk of being delayed at sidings, the great need of the campaign being motor ambulances. The American Hospital has twenty, and in this fleet of cars rests largely the secret of its success. Another observer in a letter from Paris describes the field work of the American ambulance corps with a squadron of automobile ambulances attached to the hospital, ten of which were presented by the manufacturers and ten purchased. Their chassis have been covered with khaki hoods and fitted to carry two wounded men and attendants. On their runs they are accompanied by automobiles with medical supplies, tires, and gasoline. The ambulances scout at the rear of the battle line, and carry back those whom the field hospitals cannot handle.

Equally favorable opinions have been expressed by Sir Frederick Treves and others of the efficiency of the American Women's War Relief Hospital at Torquay, England, where a unit of the Massachusetts Red Cross has been stationed.

A national leprosarium to cost $500,000 is provided for in a bill introduced in the House of Representatives by Congressman Lewis L. Morgan, of Louisiana. The measure was presented at the request of a large number of persons in Iberville Parish, La., who object to the Louisiana Lepers' Home being located in their midst. The bill also is expected to meet a general demand of the people of Louisiana, who are supporting lepers from many states. It carries out the ideas of Dr. W. C. Rucker, of the United States Public Health Service, now stationed in New Orleans. While no suggestion is made as to the locality of the national institution, arrangements have been made to point out the advantages of establishing it in Louisiana should the bill pass. The objection to the present home is due largely to the facility with which, it is said, the patients obtain their liberty and wander into towns and villages in the vicinity.

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Poverty and Sickness.

On other pages Mr. Stewart Johnson, secretary of the Hospital for Sick Children, Great Ormond street, London, presents to us a most valuable contribution on poverty as one of the ruling causes of sickness among the poor.

We all know that Mr. Johnson is correct in his generalization, and we know, too, that very much poverty, where sickness has not caused it, is due to want of thrift on the part of the victim, or intemperance, or, as Dr. William A. White, of the Government Hospital for the Insane at Washington, describes it, the "inability to get along in the community." Dr. White thinks that the want of "money sense" is as much a mental abnormality as any other onesided development, such as we sometimes find in geniuses who lack balance—the only difference is that the genius is forgiven because of what he has, while the unfortunate who has no predominating trait to offer as an offset to his lack of "acquisitiveness" find little sympathy.

However, the first step in the cure is the diagnosis, and, since we recognize poverty as one of the leading, even if remote, causes of sickness, we are getting along. One who has the "money sense" can never take away genius from its possessor, but very often he is able to deprive him of its fruits. Perhaps the day will come when the dreams of socialism will have gone so far that society will have discovered some method by which all its members can be directed in their energies so that the world will get the benefit of their most progressive powers, and at the same time so that the individual will be protected along those side lines where he lacks the ability to protect himself.

In the meantime let us spend a little more money in prevention, to save a far greater outlay in a futile attempt to cure without removing the cause.

James Gregory Mumford.

Born December 2, 1863.
Died October 18, 1914.

By the death of James Gregory Mumford, at Clifton Springs, New York, on Sunday, October 18, 1914, the profession of medicine in this country loses a skillful surgeon, an industrious and discriminating student of medical literature, a brilliant and facile writer, and an active worker in the cause of medical progress. Those who were so fortunate as to be numbered among his friends lose, also, the ennobling example of a patient acceptance of grave disability, and an indomitable courage which rose superior to physical infirmities and discovered new and greater opportunities to continue a life devoted to the service of mankind.

Dr. Mumford gave fully of his energy and ability in many fields of medical endeavor. He was trained as a surgeon at the Harvard Medical School and in the Massachusetts General Hospital. He subsequently served on the staff until ill health forced his resignation of the position of visiting surgeon. During this period he was an instructor in the Harvard Medical School, and one of its most stimulating and inspiring teachers. When sickness made necessary a life of lessened physical activity, Dr. Mumford assumed the duties of physician-in-chief to the Clifton Springs Sanatorium, where he found opportunity, among his books and surrounded by his chosen staff of sympathetic friends and helpers, to pursue the great ideals of medicine to which his devotion was ever manifest. More than a year ago Dr. Mumford was one of a small group of men who saw an opportunity to serve the great and growing hospitals of the country by the creation of a journal devoted to their interests. After THE MODERN HOSPITAL became a realization, he contributed more than his share to call attention to potential avenues of progress, especially in sanatorium practice, and his editorials served to awaken dormant consciences and to greatly improve conditions.

It is as a writer, however, that Dr. Mumford's name will most permanently endure. Always a diligent and discriminating reader, he soon de-

veloped a taste for medical literature and for the historical investigation of medical subjects, to which he brought a quickening human appreciation, that infused with life the driest and most prosy of the "medical worthies," in whose writings he took such keen delight.

The felicity of expression and the elegance of diction which his writings show were cultivated by wide reading and painstaking industry. He wrote carefully, correcting and improving his manuscript until it satisfied even his own fastidious taste. Whether it were a text-book for medical students, a more elaborate treatise for professional readers, or one of his delightful essays on medical affairs for the edification and enlightenment of the world at large, his style, like the man himself, was clean, strong, and intolerant of hypocrisy and sham.

ROBERT B. GREENOUGH.

Foreign Hospital Fiction.

Very much is being made in foreign mission circles in this country over the publication in the *Epworth Herald* and some secular journals of the fact that some of the foreign mission hospitals in the Orient are being conducted for miraculously low per-capita costs. One of the cases recently cited is the Wiley General Hospital, of Kutien, China, where, it is asserted, a 75-bed hospital is being operated at a total cost of $4 per day.

Of course, the statement that any hospital anywhere, of any size whatever, is being operated for any such money is nonsense. The writer of this editorial heard a foreign missionary state in public, a year or so ago, that in his China Hospital patients were being cared for at 7½ cents per day. At the end of the address, which was an appeal for money, some questions were asked, and it developed that the 7½ cents bought nothing at all, and that the patients, by taxation of a cent for this and a cent for that, paid for their care (?), and that the bulk of the expense of the hospital was met out of funds of the foreign missionary society which was behind the hospital.

Anyone interested in this subject will do well to read an issue or two of the *China Medical Journal*, published under the auspices of the Medical Missionary Association of China at Shanghai. One is struck at first glance of this ably conducted and well-published scientific journal, with the splendid medical and surgical work that is being done at the antipodes by a fine representation of American, British, European, and native physicians. Some of their research work into the indigenous diseases is as good as that done anywhere, and some of the case histories from their hospital clinics show that thoroughgoing, scientific surgery and medicine are being practiced. That some of their hospitals are being conducted as well as those in newer parts of the world, admits of no doubt when one reads of their results. That their administrators appreciate the latest advances in hospital practice was shown, for instance, when a subscription to THE MODERN HOSPITAL came some months ago with the following specified instructions:

> "Shipments to be made three times a year, four issues at a shipment; to be packed to carry 250 miles across the mountains on mule back."

People who run 75-bed hospitals on $4 per day are not concerning themselves even about THE MODERN HOSPITAL, and nearly every hospital in China subscribes for THE MODERN HOSPITAL, and some of them make better use of it than some other hospitals nearer home.

The boards of foreign missions had better temper the imagination of some of their propagandists, and make them tell us the truth about some of the fine hospital work their institutions are doing, rather than indulge in the fiction they have been giving us about conditions that would be anything but creditable if they were true—which they are not.

Papers on Small Hospitals.

In the January number of THE MODERN HOSPITAL is to begin a series of seven papers on topics of vital interest to small hospitals, by Miss Nettie B. Jordan, superintendent of the Aurora General Hospital, Aurora, Ill.

When THE MODERN HOSPITAL asked Miss Elizabeth Greener to prepare the series of papers that all of us found of such deep interest, it did so with the knowledge that Miss Greener was the superintendent of a hospital that had plenty of money, a rich endowment, that would permit it to develop practices without reference to first cost, without reference to expediency, but wholly in the interest of good hospital service without reference to the expense.

Many hospital workers felt that these papers were limited in their value to them, because financial problems were uppermost in their minds when considering hospital practices and hospital methods, and that they had a far different task from that of Miss Greener, who had no financial problems to worry about. Miss Greener set the pace for splendid efficiency in her series of papers, and they have been of untold value to hospital workers everywhere.

At the end of Miss Greener's papers it was decided that another series of papers was required, a series covering the operations of small hospitals which had to find their funds, and in which the

financial problems were always uppermost. In looking over the small hospitals, the editors decided that the Aurora Hospital, especially under the management of Miss Jordan, would lend itself to what was needed better than almost any other hospital in the country.

The Aurora General Hospital has 50 beds, and has now under construction a new wing that will increase its capacity. Nearly everyone who has attended the American Hospital Association conventions in recent years has come to know Miss Jordan for the breeziness and incisiveness of her discussions of hospital problems. When she went to the Aurora General Hospital a few years ago it was comfortably asleep and apparently enjoying its siesta. It was immediately and violently awakened, and not only the hospital, but its board of trustees, its medical staff, and the public have been wide awake ever since and constantly on the move. Miss Jordan is a most ambitious and active young woman. When she wants a thing in her hospital, she has the knack of getting it, because she first goes out and gets the money. The result is that she has practically what she wants and she has made of her hospital practically what she thinks it ought to be.

Miss Jordan will tell us in her series of papers how she did it all and what the result has been. Since she is a college woman and writes quite as well as she talks, we may expect to enjoy some most valuable, entertaining, and interesting papers. The list of topics follows:

January—"Raising Funds and Financing a Small Hospital."

February—"Business System in the Small Hospital."

March—"Comparative Service in the Community Hospital."

April—"Nurses and Nursing in the Small Hospital."

May—"Standardization of Medical Service in the 'Open Door' Hospital."

June and July—"Planning and Building a Small Hospital" (two papers).

August—"Psychology of Anesthesia."

Mrs. Anna M. Lawson Resigns.

Mrs. Anna M. Lawson, who for twenty-five years was superintendent of the General Memorial Hospital in New York City, has resigned her position, leaving the hospital in October. This closes, temporarily, a hospital career which has been characterized by signal efficiency and success. Mrs. Lawson began her preparation for hospital work by entering the training school for nurses of the New York Hospital, intending from the beginning to fit herself for hospital executive work and not to follow the nursing profession. During this part of her career she gave evidence of a marked inherent quality of executive ability, which found full development later.

Soon after finishing her course in the hospital she was invited to take charge, as superintendent, of the General Memorial Hospital, then known as the Cancer Hospital. During her administration the name was changed, and the service greatly enlarged by becoming a general surgical hospital, taking rank among the leading institutions of the city.

We are glad to learn that it is Mrs. Lawson's intention to continue active work, though not in a residential executive position, of a kind for which her long experience has qualified her.

Only a Dead Mouse.

A few days ago Associated Press dispatches from New Orleans to the daily papers stated that Assistant Surgeon-General Rucker, of the Public Health Service, and his associates, who are engaged in fighting the bubonic plague, had come across a dead mouse in one of the streets, and that microscopic investigation had developed the fact that death had been caused by the plague. Heretofore it has been known that plague was transmitted from the rat, the mongoose, squirrels, and prairie dogs, but this is the first instance discovered of plague in a mouse.

The last official report concerning the plague work of Assistant Surgeon-General Rucker and his force stated that up to date in the New Orleans fight there had been caught 126,966 rats, of which 189 were positive as having the plague. During the last week a huge amount of work was done in New Orleans. More than 100 vessels were inspected and fumigated, 1,097 cars were inspected and passed, 2,158 cars were ratproofed, and 17 cars were disinfected. These cars were destined for 41 states, Louisiana receiving 1,091; Mississippi, 612; Illinois, 451; Texas, 226, and other states smaller numbers.

During the week also 9,542 premises were inspected, 675 of these were disinfected, poisons were placed in 4,500 places, and notices were served on landlords in 3,336 instances. In ratproofing work the service laid 20,074 square feet of concrete and ratproofed 2,146 buildings. The number of rats taken in traps during the week was 7,074.

These figures are cited merely to indicate the magnitude of the work that the Public Health Service has on hand. The plague in New Orleans is a serious menace, although the department was able last week to report that not a single case of

either rat or human plague had been discovered during the week.

It is and has been a difficult matter to catch and destroy rats. If it develops that mice are also to be hosts and distributors of plague fleas, the possibilities are grave indeed. Rats can hide in some of the coarser merchandise, in cars and on ships, but they can also be discovered and driven out. The same methods of procedure would be impossible with mice. The smallness of these rodents permits them to hide in banana bunches, crates of the citrous fruits, in the heads of pineapples, and in almost any merchandise that has to be packed in straw.

If this mouse plague spreads, another very grave danger will follow, viz., that from dogs which are most inviting hosts for fleas of any sort. Assistant Surgeon-General Rucker has already warned the public through THE MODERN HOSPITAL that dogs can easily become hosts for plague fleas. Now, if these plague fleas are to be distributed broadcast by means of mice as well as rats, then the house dog question is to become a very prominent and immediately threatening problem.

Miss Ida Barrett's Election.

Owing to a stupid oversight in making up the list of new officers of the American Hospital Association for publication in the September number of THE MODERN HOSPITAL, the name of Miss Ida M. Barrett, elected third vice-president at the St. Paul meeting, was omitted. There is really no excuse to be offered for the omission. The only thing we can do is to call attention to Miss Barrett's election as one of the officers.

The choice of Miss Barrett was not only recognition of the merits of a woman who has done much for hospital service, but the association honored itself in honoring her. Miss Barrett has held only one hospital position in her long and useful hospital career. She graduated from the Union Benevolent Association Hospital Training School, of Grand Rapids, Mich., in 1892, and, after taking a post-graduate course in the General Memorial Hospital of New York, was in 1893 appointed superintendent of her alma mater institution, where she has labored ever since.

In her own state Miss Barrett has long ago taken the highest place in the esteem of the people. Her name and influence are to be found in the leadership of almost every fine movement that has for its object the health of the people, and her influence has extended abroad, partly because of the large number of well-trained women she has sent into nursing service and executive work. Her nurses are working in China, Japan, on the battle-

MISS IDA M. BARRETT.

fields of Europe, in the Ghettos of almost every American city, or are ably directing the destinies of hospitals in every part of the world.

It is not given to many women, or men, to be of the broad usefulness to which Miss Barrett has attained, and THE MODERN HOSPITAL is glad to have the opportunity, on this the twenty-first anniversary of her service in the Union Benevolent Hospital, to wish her Godspeed, and more strength, and a long and happy life. As bread cast upon the waters returns after many days, increased an hundred fold, so may the happiness and comfort she has sown broadcast return to bless her with the world's best offerings, and, as she has lifted the veil of sorrow and suffering from many a stricken mortal and made the sun to shine, so may many sunshiny days be for her and those whom she loves.

In a recent monthly report, Dr. Montgomery E. Leary, superintendent of Iola Sanatorium at Rochester, N. Y., Monroe county's tuberculosis hospital, made the statement that of 139 patients in that institution in an advanced stage of the disease, 110 are there largely because at one time they had accepted the dictum of an alleged expert who held that tuberculosis is not contagious. "If tuberculosis is to be stamped out," said Dr. Leary, "not only must adequate provision be made for those already infected, but for those who have wittingly or unwittingly been exposed to the disease. Here it is that we can do a tremendous work in behalf of the children. Every child, as well as every grown person, who has been exposed should have a thorough examination. Every child cared for before the disease reaches an advanced stage means not only one more individual started on the road to health, but one less case of tuberculosis allowed to develop and infect others. It means also a great economic saving in that the cost of the care necessary in the future when the disease will have secured its hold is eliminated, and another life is saved to the community. The whole success of the movement depends on the education of the laity to a realization of the necessity of heeding the first warning of the approach of the disease.

PHILADELPHIA INVESTIGATES ITS HOSPITALS.

Committee of the Philadelphia County Medical Society Makes Report of Survey During Past Year—Some Interesting and Important Findings.

Your committee submitted a report of progress on November 26, 1913. Since that time we have continued to do active work—first, in carrying out the recommendations made in our first report; second, in making a special study of certain important phases of hospital work in Philadelphia; and third, in preparing definite recommendations which will serve as a guide to the efficiency committees which have been appointed at the suggestion of the County Medical Society by more than half of the hospitals in the city.

During the past year we have visited every important hospital in Philadelphia for the purpose of collecting general information in regard to each institution and special information in regard to those which have established social service departments, follow-up systems, and other modern features. In many of the hospitals we have found a very satisfactory degree of efficiency; and, although we present in this report numerous recommendations with the hope of bettering conditions, we desire at the same time to express our hearty appreciation of the splendid work that has already been done by many institutions to make their work efficient.

Conference of hospitals and dispensaries.—Your committee was authorized a year ago to call a meeting of all of the hospitals and dispensaries in the city to consider proposed plans for organizing a movement to increase the efficiency of Philadelphia hospitals. A general meeting was held in the office of the director of public health on December 10, 1913, at which the proposed plans were discussed; and a second meeting was held in the finance committee room in the City Hall on March 26, 1914, at which the plans were further considered, with special reference to the establishment of a central purchasing bureau. At these meetings nearly every important hospital in the city was represented, either by members of its board of managers or by its efficiency committee.

Report on the hospital situation in Philadelphia.—Your committee was authorized to present at these meetings a definite plan for employing a competent efficiency engineer to prepare a report on the hospital situation in Philadelphia. At the first City Hall meeting a plan was presented, but no conclusion was reached in regard to the method of making the study or of securing the necessary financial support, and no one has as yet been employed to do the work.

Your committee believes that it would be of great assistance in paving the way for the proposed local study if some organization with adequate resources at its command would first make a preliminary study of the entire hospital situation in the United States and would define standards by which to measure the efficiency of a hospital. Such a report would provide your committee and the efficiency committee in each hospital in Philadelphia with a working plan for accomplishing the purpose for which they were appointed.

We, therefore, recommend that the County Medical Society indorse the request which the American Medical Association, the American Congress of Clinical Surgeons, and the American Hospital Association have forwarded to the Carnegie Foundation, asking that the Foundation prepare a report on the classification and standardization of hospitals—a report that will perform as great a service for the hospitals of this country as the report on medical education has already performed for the medical schools. We suggest that the president of the County Medical Society appoint a special committee of three members to draft a suitable communication and present it in person to the officers of the Carnegie Foundation.

Uniform system or hospital accounting and statistics.—Your committee was also authorized to invite the cooperation of the State Board of Charities in securing the adoption of a uniform system of accounting and statistics by all of the hospitals in Philadelphia. We met the state board on January 30, 1914, and found them entirely willing to cooperate with the County Medical Society in this matter. They appointed a representative to confer with our representative in regard to the details of the proposed system of accounting. Several informal conferences have since been held, but as yet the committee and the state board have reached no final agreement.

Owing to the absence of any attempt at standardization in the numerous institutions visited, it has been impossible for us to make our medical and financial statistics either complete or accurate. This fact merely emphasizes the necessity for all of the hospitals in Philadelphia to adopt a standard system of records and reports—a system that will furnish an adequate basis for comparing the work of similar institutions and will enable the executive officer of each hospital to present to his managers at frequent intervals a complete report of the work done and the unit cost of this work.

Your committee, therefore, recommends that the County Medical Society express its appreciation of the splendid work that has been done by the Board of Charities to increase the efficiency of institutions throughout the state, and that the society again urge this board to complete the preparation of a uniform system of accounting and statistics, and to use its influence in securing the adoption of this system by every hospital in Philadelphia.

MEDICAL RECORDS AND FOLLOW-UP SYSTEMS.

Summary of information gathered.—In 16 of the largest hospitals in Philadelphia we have made a careful study of the medical record system and secured samples of all of the blanks used. In 31 percent of the hospitals visited the records are kept in such a way that they are absolutely useless for scientific purposes.

Only 3 of the 16 maintain a separate file in which all of the operations performed in the hospital are recorded, and operations of like character are grouped together so that anyone may determine quickly the number of operations performed during a given period, with the results of each. Only 7 of the 16 have any method of making sure that the diagnosis is entered on the record and that the history is complete before the patient is discharged.

The 8 hospitals whose medical histories are scientifically filed use four different systems of classification—2 use an alphabetical list of diseases, 1 the international system of classification, 4 the system devised by the Philadelphia General Hospital, and 1 a special classification of its own.

In 2 hospitals the chief resident physician must check the history before the patient is discharged, in 4 he checks the history before it is filed, while in 2 others the registrar looks over the records at stated intervals. Thus in 8 hospitals some attempt is made to secure the completeness and correctness of the medical records.

Only 4 of the 16 dispensaries in which the record system was studied file all records together in a central record room. In the others each clinic keeps its own records in its own way. In no hospital is the same system of classification used in both house and the dispensary,

and in no instance is provision made for transferring the complete history of the patient from one department to another when the patient is transferred.

Purpose of follow-up system.—A follow-up system properly administered keeps the members of the medical staff in touch with every discharged patient, and thus enables the staff to complete its treatment and to ascertain the results of that treatment.

Recommendations.—Your committee recommends that the County Medical Society take the following steps with a view to accomplishing this purpose:

1. Prepare a uniform system of morbidity records and statistics based on the international classification of diseases and conditions, and urge every institution to adopt the system, with such variations as may be suggested by the needs of individual hospitals.

2. Urge each hospital to perfect its system of medical records so that they will constitute an adequate foundation for the proposed follow-up system.

3. Urge each hospital to keep an accurate record of the condition of patients at the time of their discharge, and to provide for an accurate follow-up of patients after their discharge.

4. Urge each hospital to put in operation a definite plan for obtaining the information desired in regard to each discharged patient in one of the following ways:

a. By writing at stated intervals to the patient, his physician, or one of his friends who has a permanent address.

b. By sending a representative of the hospital, at stated intervals, to interview the patient or his physician.

c. By taking whatever steps may be necessary to insure the return of the patients to the hospital at the proper time for further examination, and in some cases for treatment.

MEDICAL STAFF.

Summary of information gathered.—In 59 of the hospitals and dispensaries of Philadelphia, 1,316 doctors hold 2,291 appointments, 225 holding 3 or more, and a few holding 5, 6, 7, and even 9 different appointments.

Seven of the hospitals visited—including all but one of the teaching hospitals—appoint at least a part of their staff for continuous service. The others maintain a rotating service, in which staff members are on duty from three to six months in each year.

Recommendations.—Your committee recommends that the County Medical Society urge each hospital in Philadelphia—

1. To appoint as visiting surgeons and physicians men who have done and are doing, or who will do, the work required.

2. To develop the medical organization of the hospital toward the point where every member of the medical staff will give continuous service.

3. To retire to the consulting staff chiefs who, because of the calls of private practice or for other reasons, do not give their hospital patients the needful time and attention; at the same time extending to them the privilege of attending patients in private rooms and in some cases in the wards.

4. That members of the visiting staff on duty shall try to determine by personal investigation that food served to ward patients, private patients, and nurses is of suitable quality and properly prepared.

SOCIAL SERVICE.

Summary of information gathered.—Thirty Philadelphia hospitals have established social service departments, although 4 have been discontinued because of the lack of funds. We visited 21 of these departments; 10 are directly responsible to the superintendent, while the others are supervised by special boards and do not form an integral part of the hospital.

In 6 of these departments a social worker secures a social history of every patient who enters the dispensary, and sends the record, with the patient, to the physician. In 6 others, workers secure a social history of patients admitted to only a part of the clinics. In 3 hospitals the social worker is the executive officer of the dispensary. In 14 dispensaries and in all of the hospital wards where social service work is done, only a small proportion of the patients are treated by the social service department, the patients to be treated being selected either by the workers themselves or by doctors or nurses.

There are now 77 paid social workers in the hospitals of Philadelphia. The 60 workers in the hospitals visited handle an average of 3,400 cases per month—i. e., an average of 57 cases per worker—and make 4,400 visits, an average of 73 visits per month per worker.

Purpose of social service.—A social service department properly administered supplements the medical diagnosis and medical treatment by a social diagnosis and social treatment, that makes the work of the doctor more effective and at the same time reduces the average cost to the hospital of treating a patient.

Recommendations.—Your committee recommends that each hospital take the following steps to accomplish this purpose:

1. Establish a social service department as an integral part of the hospital—i. e., place it under the supervision of the executive of the hospital, the superintendent, and provide for its support from hospital funds.

2. Provide that a representative of the social service department shall make a record of the important social facts in regard to every patient admitted to the hospital or the dispensary.

3. Provide for close cooperation between the doctor, the nurse, and the social worker in the treatment of the patient.

4. Provide for cooperation between hospital social service and other social agencies in caring for the sick and protecting the health of the community.

5. Use the social service as a "third arm" of the hospital, that will keep the staff in touch with present and former patients, and, in addition to correcting faulty conditions in the home, will bring back to the hospital discharged patients who are in need of after-care, and dispensary patients who have failed to return after the first or second visit.

6. That hospitals whose funds are not available for the support of a social service department endeavor to raise special funds for this purpose by private subscription.

DISPENSARY ORGANIZATION AND DISPENSARY ABUSE.

Summary of information gathered.—We visited 36 Philadelphia dispensaries; 3 have a social worker as executive officer, and 24 have a clerk or social worker who admits patients to all or a part of the clinics. The patients who visit dispensaries do so for very definite reasons—usually because of their inability to pay for the same grade of service elsewhere. Patients who can afford to pay for private physicians should not visit a dispensary.

Your committee believes that the best way to check dispensary abuse is to appoint a competent executive officer for the dispensary, and authorize him to deal with the problem at the admitting desk, charging a small fee for registration and treatment, which will produce the funds needed for the investigation of those cases which do not present a satisfactory statement when they apply for admission to the dispensary. We believe that by this method it will be possible to check dispensary abuse far more effectively than it could be checked by means of legislation.

Purpose of appointing a dispensary executive.—A responsible executive officer is needed in every dispensary for the same reason that a general manager is needed in every business. He will direct the work of all employees of the dispensary, will decide whether applicants are entitled to admission, will collect fees for registration and treatment, will enforce all rules and regulations prescribed by the managers for the government of the medical staff and the employees, and will help to check dispensary abuse.

Recommendations.—Your committee recommends that each hospital take the following steps to accomplish this purpose:

1. Appoint for the dispensary a competent executive officer, who shall be under the authority of the superintendent of the hospital, and shall be paid whatever compensation may be necessary to secure his services.

2. Define clearly the rules and regulations governing the dispensary, and give the dispensary executive the necessary authority to enforce them.

DISPENSARY FEES.

Summary of information gathered.—Ten of the 36 dispensaries visited charge a fee of 10 cents, 20 cents, 25 cents, or 35 cents for registration, and five others charge a registration fee in the surgical clinics only; 5 charge a fee of 10 cents for each subsequent visit; 6 others charge a small fee for surgical dressings, and 5 of the 36 have fees for special service, as x-ray, etc. In some Philadelphia dispensaries the receipts from fees alone, not including receipts from drugs, amounted in 1913 to over $3,000. In every dispensary making a charge for registration or treatment there is some person with authority to determine which patients shall be admitted without payment of the fee. As far as we can learn, the installation of the fee has in no instance diminished the dispensary attendance.

The Massachusetts General, Peter Bent Brigham, and Boston dispensaries have within the past year increased their fees to 25 cents for registration of adults and 10 cents for children, and 10 cents for each subsequent visit. With 147,000 visits to the Massachusetts General Dispensary last year, the receipts amounted to over $53,000, $29,000 being for fees for registration and treatment, and $24,000 for drugs; while at the Boston Dispensary $30,000 was received as a result of 116,000 visits, $22,000 being for fees for registration and treatment, and $8,000 for drugs.

In 16 of the 36 Philadelphia dispensaries visited a flat rate of 10 cents, 15 cents, or 25 cents is charged for each prescription, while in 13 of them drugs are sold at cost. In 3 no charge is made for drugs and in 3 no prescriptions are filled.

Purpose of charging dispensary fees.—It is desirable to charge a small fee for registration and treatment in a dispensary for a number of reasons. It helps the patients to preserve their self-respect, it opens the dispensary to many who will not ask for free treatment and yet cannot afford to pay a private doctor, and it provides a considerable income, which can be used to develop the dispensary.

Recommendations.—Your committee recommends that each hospital take the following steps to accomplish this purpose:

1. Fix a small fee for registration and treatment in the dispensary, and provide for the collection of this fee by some person who shall be stationed at the admitting desk.

2. Provide that no one shall be turned away because he has no money, and that no one shall be admitted if he can afford to employ a private doctor.

HOSPITAL BUREAU OF STANDARDS AND SUPPLIES.

Summary of information gathered.—We have communicated with the nonresident members of the New York Bureau of Standards and Supplies, asking them to state the advantages or disadvantages of membership. The recommendations have been most hearty and enthusiastic, and no disadvantages were reported. Some of the significant passages in the letters received are as follows:

Johns Hopkins Hospital, Baltimore, 366 beds.—"Our saving is considerably more than the amount of our dues."

Lakeside Hospital, Cleveland, 273 beds.—"The saving on a few items has been sufficient to cover the cost of $200 a year."

Grace Hospital, Detroit, 200 beds.—"We have saved enough during our first year's membership in the bureau in alcohol and whisky alone to pay the cost of our membership for the entire year."

Muhlenberg Hospital, Plainfield, N. J., 100 beds.—"Our connection with the bureau enables us to buy a list of things in small quantities at the very lowest wholesale prices."

Albany Hospital, Albany, 365 beds.—"We have saved on coffee alone in this institution our entire dues and fees."

Pennsylvania Hospital, Philadelphia, 315 beds.—"If we saved nothing, we would gladly pay the fee because of the advantages gained in knowing correct standards for supplies."

Purpose of the hospital bureau.—A Philadelphia hospital that joins the Hospital Bureau of Standards and Supplies in New York will be able to buy a large part of its supplies under general contracts, made by the bureau at the lowest wholesale prices, and with ample guarantees of quality, and in addition will receive from the bureau at frequent intervals reliable information in regard to standard specifications and standard prices.

Recommendations.—Your committee recommends that each hospital take the following steps to accomplish this purpose:

1. Join the Hospital Bureau of Standards and Supplies in New York, at an annual cost of $100 for institutions whose current expenses amount to less than $50,000 a year, and $200 for institutions whose current expenses amount to more than $50,000 a year.

2. Order from dealers with whom the bureau has made general contracts those supplies which can be bought to better advantage in this way; and continue to order from local dealers and others perishable foodstuffs and also those supplies which cannot be bought at a lower price under the bureau contracts.

Conclusion.—In conclusion, your committee recommends that the County Medical Society adopt this report, indorse its recommendations, discharge the committee, and forward copies of the report to each member of the efficiency committees which have been appointed at our request, and to the board of managers of each hospital in Philadelphia, with a letter urging the immediate adoption of the recommendations made.

Your committee asks to be discharged, not because we believe that we have finished our work, but because we realize that this work is of such importance and such magnitude that it is beyond the resources of this committee, or indeed of the County Medical Society itself, to provide the funds and the personal service that must be provided if the work is to be carried to its logical conclusion.

EDWARD MARTIN, M. D., Chairman.
GEORGE E. DESCHWEINITZ, M. D.
ROBERT G. LECONTE, M. D.
CHARLES B. PENROSE, M. D.
WILMER KRUSEN, M. D.
JOHN D. MCLEAN, M. D.
JOSEPH S. NEFF, M. D.
RICHARD WATERMAN, Secretary.

Much praise for its splendid management of the Ohio state hospital was given the state board of administration by State Budget Commissioner W. O. Hefferman, efficiency expert, who recently completed an inspection of these institutions said to have been the most searching ever made. In his report Commissioner Hefferman says, among other things: "I am sure that in no place will there be found a more thoroughly human, efficient, and capable instrument of control than that typified in our board of administration. The old method of conducting these institutions was changed because it was no extremely unsatisfactory in its actual operation. Our hospitals are no longer run for the benefit of inefficient and corrupt powers. The inmates are at home—a home that finally is run for the patient alone. He derives the full benefit of every cent expended on that institution, and in our correctional institutions the inmates are being taught to be of service to their fellows; they are put into condition and acquire the habit of being good instruments. Their ability, energy, and excellence is here developed, and they are sent out into the world again equipped to serve the cause of American individuality, because they have helped to effectively accomplish their own individual emancipation."

CURRENT HOSPITAL LITERATURE

Albert Allemann, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Frank B. Martin, Domestic Literature.
Army Medical Museum and Library, Office of the Surgeon-General U. S. Army.

Economy in Hospital Administration. Boston Med. and Surg. Jour., October 22.

The State Hospital Commission, in its report for the year ending September 30, states that the elimination of waste and economy in the purchase of supplies has enabled it to keep its expenses within the appropriation for the maintenance of the fourteen institutions under its supervision, and that this is the first year in which these have been operated without a deficit. Modern business methods have made this change possible, and the largest single saving was accomplished in the purchase of fuel, the expense of which item was further reduced by the reconstruction of furnaces and the installation of scientific heating apparatus. The quality and quantity of foodstuffs have not been diminished, but economy has been effected by standardizing the supplies and purchasing them in strict conformity with the requirements of the estimate law. The care of the 32,000 insane required approximately $7,000,000.

Effect of Lightning on a Reinforced Concrete and Steel Dome. C. D. Perrine, Science, Philadelphia, 1914, XL, October.

The increased use of reinforced concrete for buildings and the effects of lightning on a metal dome surmounting walls of this construction become a subject of general interest. The writer cites an instance where a steel dome, sheathed with galvanized iron, was the point of discharge for a fairly heavy flash of lightning, the induced currents in the light and power lines being sufficiently heavy to blow the fuses in both. It became a severe test for such construction—a metallic dome surmounting concrete walls heavily reinforced with iron, the metal in the walls having a good ground connection and being connected also with the dome. The conclusion is to be drawn that, after the resistance of the air was broken down, the dome and metal in the walls were ample to carry off the discharge without the slightest apparent damage to either the structure or a man who was in the dome at the time.

The Value of the Library in Hospital for Mental Disease. Edith Kathleen Jones. Maryland Psychiat. Quart., 1914, IV, 8.

The writer, while conceding the advantages of access to public libraries in large cities or towns, claims the great thing in a psychiatric hospital is its own library; that each hospital should have one, however small, with at least a few new books added as frequently as possible, and someone—librarian, officer, or patient, the best available—to see that the books reach the patients and accomplish their purpose of recreation or education. The public library may be drawn on to supplement the institution's library, but the best results are to be obtained from books which are at hand when they are wanted.

The Newer Mission of the Doctor and Hospital. John Punton, Pacific Med. Jour., San Francisco, Cal., 1914, LVII, 477.

In taking a retrospective view of the principal features that characterize the present age, the author believes it is a part of the newer mission of doctor and hospital to bring about desirable changes, that the hospital, dispensaries, and even medical practice itself can become better equipped for the greater medical, moral, social, human welfare public duties. The real function of the well-equipped modern general hospital is no longer considered as an exclusive medical monopoly, or private concern, even when owned and controlled by private interests. Moreover, the modern hospital must not be recognized as a great commercial plant, where only the good-paying cases are received and discharged, and where physicians, surgeons, pathologists, and specialists are most tempted to enter into envious and bitter controversies. The members of the profession who have at heart the best interests of the hospital believe that, independent of its strictly technical, scientific, medical, and surgical detail, the work of a modern and efficient hospital should include a close study of the social, humanitarian side of disease and suffering, and that more strict attention be paid to the investigation of worthy and unworthy applicants, including their social and moral status, as well as other conditions that underlie the pathogenesis, the spread, and continuance of disease. The large welfare work of a modern general hospital and dispensary includes not only its purely scientific, medical, and surgical work, but also the rigid expert investigation of the social pathogenesis of disease and suffering. It is no longer regarded as a dispenser of charity, even though the medical services are free or shorn of monetary consideration. Its functions are now sufficiently enlarged to include a great and responsible charge and philanthropic duty, by its protection of all citizens from not only the menace of uncontrolled contagious and loathsome disease, but also the ravages of epidemics. So considered, this newer mission of the doctor and hospital becomes a golden link in the great chain of the larger humanitarian social service welfare work now being inaugurated throughout the country.

Hospitals in Brussels. Pacific Med. Jour., San Francisco, Cal., 1914, September.

The editor furnishes an interesting account of Dr. Depage's private hospital in Brussels, a new three-story building of gray brick and sandstone. "We were at once taken to the third floor, where we changed our coats for operating gowns," says the author. "We were then conducted to a well-designed and magnificently equipped operating room, in the center of which stood a large permanently fixed operating table of the French or Swiss type, fitted with hydraulic lift and innumerable other adjustments. We had all been required to incase our feet in cotton bags, and were soon floundering about like so many Eskimos on snowshoes. The surgeons protect their beards (and most of the surgeons of the French school possess the latter in growths of wondrous luxuriance) by a strip of cotton sheeting suspended from a bar stretched across the bridge of the nose, looking not unlike the yard and mainsail of an old-fashioned square rigger. Rubber boxing gloves were worn upon the hands, the usual explana-

tion being offered that they were cheaper than the thin and only sensible variety. It is beyond comprehension that our ordinary American surgical glove should be more expensive than the one used by the French and Belgian surgeons, for surely the latter contain sufficient stock to make enough gloves to last an American operator a couple of years. The clumsiness of these articles, precluding all possibility of dexterous work, renders obvious the valuelessness of the explanation for their use. At the elbow of each surgeon were two large cans of hot and cold sterile water, and these could be drawn from at will by the operator using the sterile handles. Ether was the anesthetic given, and was administered by the drop method on a modified Esmarch inhaler. The operating room nurses were bare-armed, and wore thin cotton gloves, a type a little worse than none at all. The patient operated on was a woman who presented certain vague gastric symptoms. The abdomen was opened and the viscera explored. Nothing grossly pathological was discovered. However, a gastroenterostomy was performed, the operator following practically the old technic of Roux. The abdomen was closed with interrupted, through-and-through silk sutures. The patient was then turned on her side, the loin opened, and a movable right kidney exposed and fastened into position. To accomplish this the operator passed six large catgut sutures directly through the center of kidney substance, and fastened these in the adjacent lumbar fascia. After the operation was completed, Prof. Depage showed us about his hospital. In the sterilizing room was seen the complicated apparatus which we had noted in all French hospitals. The corridors of the institution are laid in terrazo, and have been down six years without showing wear. The walls throughout are of enameled plaster, and all rooms are provided with sanitary coves and bases. In the basement we were shown the kitchen and the laundry. The little hospital contains 18 beds, and the entire plant is, for the most part, scientifically and completely equipped.

New Bed Bath Tub. E. A. Gallegher, New York Med. Jour., 1914, October 24.

The invention is for the purpose of reducing temperature, and to be used as a substitute for the portable bath tub in general use in typhoid and sunstroke cases, delirium tremens, nephritic cases, scarlet fever, paralysis, bedridden cases, rheumatism, severe burns, or where a full saline bath is ordered. The tub may also be used for any medicated bath, and also for vapor baths and a hot bath following. This tub can be hung up in the bath room, thus occupying a small amount of space, and will relieve the nurse of lifting the patient, and save the patient the inconvenience of being moved about and handled unnecessarily. It is semicircular, made of light tin, and can be carried very conveniently by the nurse or attendant. It is placed at the patient's back and he rolls in on the side. When the bath is completed, the water is drained off, and the tub is turned on the side, thus allowing the patient to roll out on the bath sheet, which is spread over the bed, the tub is removed and the patient is covered up. It will be a useful article for the bathing of scarlet fever cases, enabling patients to have their bath in bed instead of getting up and going to the bath room, which many people consider unwise, especially if the heart is weak.

The Terek (Caucasus) Leper Hospital from 1898-1913 (La leproserie du Térek (Caucase) de 1898-1913). Dr. Keraval.

This leper hospital was established in 1898. At first it consisted of six small houses for the patients, a small church, and a dwelling for the director. Gradually five more houses for the patients and other necessary buildings were added. The grounds comprise forty-eight hectars (115 acres). At the head of the institution is a medical director, assisted by two physicians. During the fifteen years of its existence the hospital treated 58 men and 42 women. Of these patients 44 died and 6 were cured. At present there are 24 men and 17 women at the institution. The annual expenses are 15,000 rubles (about $8,000).

Preventive Inoculation Against Typhoid Fever of Physicians and Nurses in Hospitals (Typhusschutzimpfung der Aertzte und Pflegepersonen in Krankenanstalten). Ztschr. f. Krankenanst., Leipzig, 1914, X, No. 38.

During war times there is always danger of typhoid epidemics, and all possible preventive measures should be taken. For this reason the minister of the interior of Prussia issued a circular in which he advises the physicians and nursing personnel of all hospitals to submit to antityphoid inoculation. The typhoid vaccine is furnished gratis to all hospitals by the Robert Koch Institute for Infectious Diseases in Berlin, with instructions how to carry out the preventive inoculation.

New Haven Hospital Management.

As noted in the Boston *Medical Journal*, the change in hospital management, and the more intimate relation being established between hospitals and medical schools, is exemplified by recent action of the New Haven Hospital. On condition that Yale University would raise a large sum for new buildings and endowment, it was agreed that the New Haven Hospital would be taken over by the university, and used in connection with its medical school as a university hospital. The hospital is to be under control of the medical school, and the services of its appointees are to be continuous, after the plan of Boston institutions—the Johns Hopkins Hospital and others. In addition to the present hospital at New Haven, an approximate fund of $750,000 is to be devoted to the construction of a special hospital for tuberculosis, to be situated in the outskirts of the city on a tract of land, which will form part of the general hospital plan. Dr. Simon F. Cox has been appointed superintendent of the enlarged institution.

Gouverneur Clinic.

In the October number of the *American Journal of Nursing* an interesting resume of the work of the visiting nurses of the Gouverneur Clinic is given by Winifred W. Allen and Elizabeth McConnell. The basis of the report was the patients who attended the clinic during the year 1912 and who had been under clinic care or nursing supervision for six months or more. Despite difference in race, religion, and language, the overwhelming majority of the patients proved to be teachable in the essentials of personal hygiene and prophylaxis, and most of those whom the clinics trained for six months or more both learn and practice what is taught them. The conclusion is drawn, therefore, "that no class can be looked on as wholly unteachable, and that time and persistence yield a surprising percentage of good results even with the least promising cases." This is distinctly encouraging for all who are engaged in public health education and holds out promise for excellent results.

The Anthony Hospital, Anthony, Kan., was destroyed by fire recently. The building was owned by Dr. Walker, of Harper, but had just been vacated by Dr. Hatch, who had been conducting the hospital.

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HOME-MADE HOSPITAL APPLIANCES

Harper Hospital Toilet Carriage.

DESIGNED BY WAYNE SMITH, M. D., SUPERINTENDENT HARPER HOSPITAL, DETROIT.

This carriage has been in use for ten months in the wards of Harper Hospital, and has proven very satisfactory. It is a labor-saving device for nurses, as it saves many steps and at least one hour's time of each nurse when attending to the patients' toilet in her care in the mornings and afternoons. It is very serviceable when a patient needs a full bed bath, as hot water is available without the necessity of the nurse leaving the patient, and

Fig. 1. Hospital toilet carriage—1, hot water tank; 2, outlet for hot water; 3, waste water tank; 4, waste water funnel made to fit a basin; 5, clean out; 6, porcelain top; 7, towel railing; 8, intake for hot water.

is also useful in mornings after the patients' toilets when doing ward work, such as cleaning bedside tables, etc., the probationer's duty. The carriage is also used daily as a surgical dressing carriage when the surgeon makes his rounds, enabling him to go from patient to patient without the necessity of leaving the ward to wash his hands. The carriage is simple and light in construction, easy to clean, can be manipulated very readily by the nurse or orderly.

Fig. 1 shows the carriage, with a nickel-plated towel rack, a porcelain top, and a nickeled copper tank, which is removable and holds twelve gallons of hot water. Below the clean water tank is the waste water tank, which is so constructed that it can be cleaned out from the top. On one end is the waste water funnel (*4*), and above this funnel is the intake for the clean water (*8*). The intake has a nonloseable cap, with a chain.

An orderly fills the tank with hot water in the morning, places the basins, soap, and wash cloths on the top, and hangs the towels on the towel railing. The carriage, when to be used, is pushed into the ward, and the nurse takes a basin of clean water, soap dish, wash cloth and

Fig. 2. Hospital toilet carriage—Shows the carriage in use.

towel to each of those patients who are able to wash themselves, and those who are not able to wash themselves are cared for by the nurses. The early morning ablutions begin one hour later, when this carriage is used. A piece of rubber tubing attached to any faucet will suffice to fill the tank.

This home-made toilet carriage has been in use also at the St. Louis City Hospital for some time.

The national headquarters of the American Red Cross has received recently from United States Ambassador Gerard, at Berlin, an appeal for American financial support of the American hospital lately organized in the Prussian capital to care for German wounded. It is claimed the Red Cross cannot at present meet this request owing to its limited funds, but hopes through the generosity of the American people soon to be able to do so. According to a statement from its headquarters, the contributions already received by the American Red Cross for the relief work to be prosecuted on behalf of the sick and wounded of the various nations involved in the great European war total approximately $300,000. This sum, it is stated, is far under the amount needed for this great work. The cost of maintaining the relief ship recently sent abroad bearing nurses and surgeons to the warring countries is alone $15,000 a month, and this is but one of the ways in which the American organization hopes to help the cause of humanity.

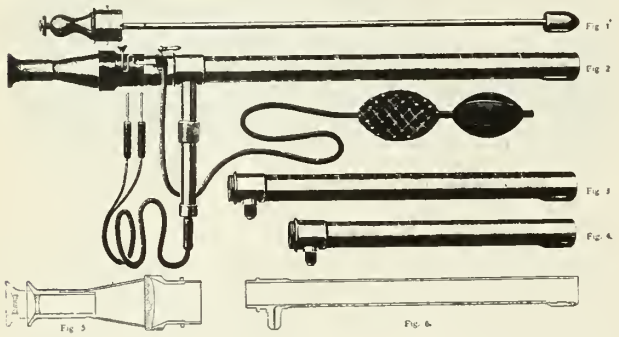
Miss Lena Voss, a recent graduate of the Hackley Hospital training school, Muskegon, Mich., is the new superintendent of the mission hospital of the Christian Reformed Church of America at Rehoboth, N. M. The hospital is situated at the principal mission station of the denomination in the Navajo-Zuni Indian field, and receives both white and Indian patients.

NEW INSTRUMENTS *and* APPLIANCES

Vincenz Mueller, Technical Editor.
Geo. W. Wallerich, Associate Editor.

Dr. O. Ringleb's Proctoscope.

The proctoscope here shown embodies several new features which commend it over many existing types. With most of the present electrically lighted proctoscopes it is difficult at times to make a satisfactory examination for the reason that either the illumination is weak, the light being thrown from a lamp which is placed too far from the part under observation, or, if the lamp is in the distal end of the tube, often the illumination is interfered with through dressings which are caught by the lamp in making applications. The Ringleb proctoscope seems to overcome these objections. The miniature lamp is mounted



Ringleb's proctoscope and sigmoidoscope, with telescope and inflating attachment.

within a recess at the side of the proctoscope tube and at the operating end of the instrument, and thus the illumination is in no way interfered with.

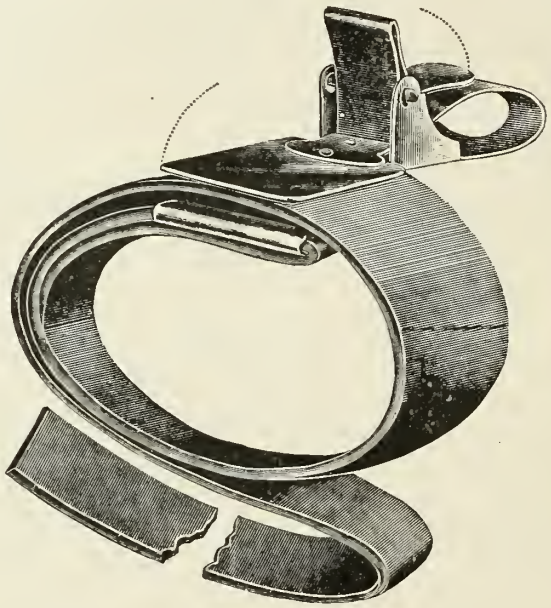
Another addition has been made in which examination is rendered more satisfactory—namely, the magnifying eyepiece. This eyepiece is adjusted so as to accommodate the various lengths of tubes, which are supplied in lengths of 20, 25, and 30 centimeters.

Electrical connection is made by a metal sliding contact switch, which screws on, and can also be used as a handle for manipulating the tube. An air cock, with dilation bulb, completes the instrument.

A New Tourniquet.

BY DR. RUTHERFORD B. H. GRADWOHL, ST. LOUIS.

The use of an efficient tourniquet has become rather important since venu-puncture for the purpose of withdrawing blood for Wassermann tests and salvarsan injection have become so popular. In some cases the old time-honored method of tying a piece of rubber tubing about the upper arm will suffice in making the veins stand out prominently, yet there are cases where this is not possible—for example, in individuals with great accumulation of fat on the arm, or on women who do not have prominent veins, as well as on small children. In such cases it is necessary to use a tourniquet that will give a uniform and efficient compression—one that can be readily adjusted and, what is of greater importance, that can be



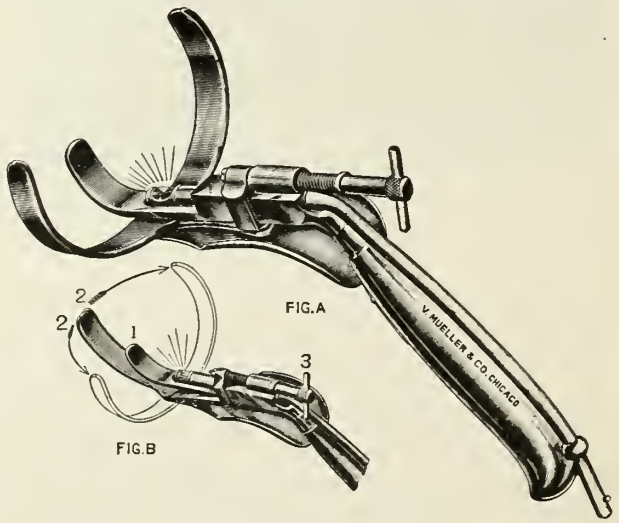
Gradwohl tourniquet.

readily removed without fear of dislodging the needle from the vein.

The tourniquet illustrated here seems to have all these advantages, inasmuch as the slip catch on this instrument permits the operator to insert the needle into the vein, hold it tightly, and release the tourniquet with one motion.

Suprapubic Bladder Retractor.

This instrument was devised for the purpose of assisting the surgeon in his bladder work. When folded (Fig. B), it can be introduced through a small suprapubic incision, as it does not occupy any more space than the index finger. As the bladder is capable of being dis-



Corbus suprapubic bladder retractor.

tended to a greater degree in the transverse diameter, this instrument is especially valuable in examining the internal urethral orifice before and after prostatectomy, in suturing over the cut surfaces of the mucosa after

prostatic enucleation, excising of tumors, and, in fact, in all intravesical operations.

The instrument consists of the shaft, with quick-thread screw for extension of the blades; the wide posterior abdominal retracting blade; two sets of folding blades, and the light carrier, which is supplied with a so-called cold tungsten bulb, furnishing a white, brilliant light. All points are carefully rounded to prevent injury to the parts, and the connections are all slip-joint, so that the blades may be quickly exchanged and the instrument taken apart for sterilization. The extension possible with the small blades is 7 centimeters, and with the large blades 11½ centimeters.

Operating Table with Adjustable Top.

When visiting hospitals abroad, one will see in many operating rooms, especially in France and Germany, elaborate and complicated operating tables, which seem to be very much at variance with some of the other simple and, in some cases, meager equipments. The cost of these tables with the complete array of attachments is so high that American surgeons and hospital superintendents, with few exceptions, have refused to consider the purchase of such tables in the past, although they acknowledged that some of the features incorporated in them are desirable and superior to those ordinarily used in our institutions.

The principal advantages of these tables are (1) that the top can be adjusted to a height to suit the stature of

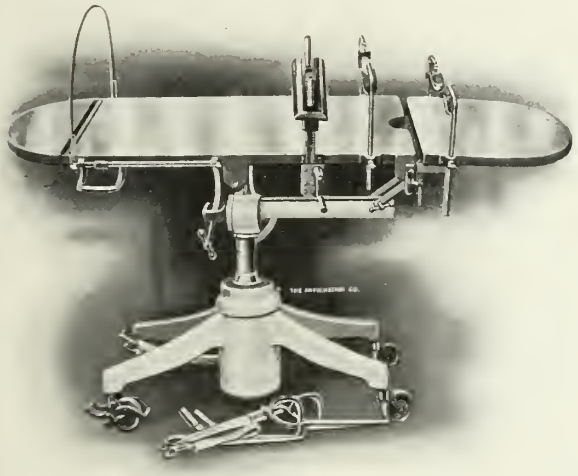


Fig. 1. Adjustable table in flat position and showing various attachments.

the operator; (2) that the top may be rotated, either for the purpose of securing better illumination of the field of operation or for the exhibition to the clinic without changing the location of the table; (3) that the top may be tilted, which is a great advantage in some cases.

The table illustrated here is made in this country, and has been simplified to a considerable extent from the complicated pattern, thus reducing the cost without sacrificing any of the desirable features. The strong, heavy base is supplied with an oil pump and the top is adjustable from 32 to 38 inches in height. The top is made of an alloy of metals impervious to all solutions used in surgical procedure. The base is white enameled, and the various fittings, such as heel stirrups, leg rests, shoulder rests, ether screen, etc., are nickel plated. An elevating bridge for use when operating on kidney or gall bladder cases is provided, and the bridge may be quickly removed when not required. Special features may be added, such as a bridge for elevating the neck in goiter cases.

With the table are adjustable lateral braces to prevent

Fig. 2. Adjustable table in Trendelenburg position.

the patient from slipping off the table when treated laterally, and foot supports when in reverse Trendelenburg position.

The top of the table may be quickly changed by the

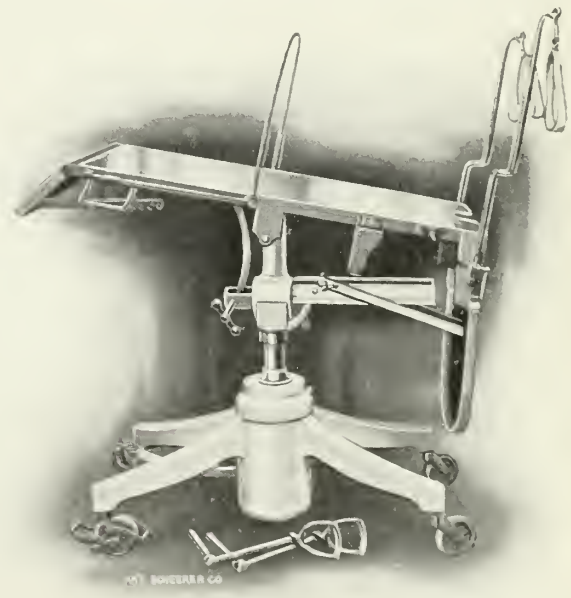
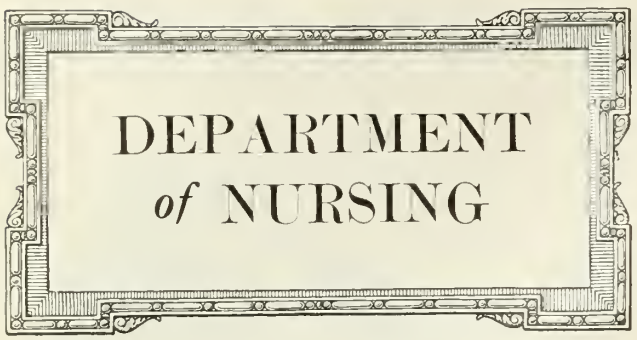


Fig. 3. Adjustable table in position for head or neck work.

anesthetist to any required position and securely locked. Two of the heavy rubber-tired casters are provided with foot brackets to hold the table rigid during an operation.



Mary M. Riddle, R. N., Editor,
Superintendent Newton Hospital, Newton Lower Falls, Newton, Mass.

Encouragements.

The nurse's work is constantly growing in favor. Public schools and colleges are paying attention to its possibilities and opportunities, and some colleges are offering courses preparatory to the nurse's work in the hospital or interspersed with it, while public schools are directing the courses of their students with a view to fitting them for the nurse's work on completion of the public school course. While all this is but the natural trend and does not mark appreciation of what has been done, it does show a realization of the need for adequate preparation, and is just in line with the arguments put forth by this association and all those who believe in a preparedness before entrance to a training school is gained.

Nurses all over the land owe much to the standards of the Red Cross. This great organization laid down the requirement that a graduate nurse, to be accepted by them, must first be a registered nurse, and she must also be a member of her state nurses' association or other organization for promoting the interests of the nursing profession and advancing its standards.

Inasmuch as membership in the Red Cross has become very popular, this has been a powerful incentive to nurses to attain an excellence in their work, both theoretical and technical, and is an indication that states must attain and maintain standards such as we are struggling for at the present time.

All along the line are found reasons for encouragement and proofs of the statement that the day will surely come when the advanced standards of today will be but minimum requirements.

Nothing more convincing or more encouraging for the future has recently come to notice than the reports from participants and descriptions in the secular press of the recent celebration of the twenty-fifth anniversary of the opening of Johns Hopkins Hospital. Those fortunate enough to be present and enjoy the various forms of celebration were impressed with the part taken by the nurses, who shared and shared alike the courtesies and honors with the other professional people present. The press, after paying just and fitting tribute to the medical school as such and to the hospital as such, dwells at greater length on the school for nurses, saying that the new profession of the trained nurse has almost literally grown up during the life of this hospital, for it says:

"In 1889 there were not in the whole country, outside of hospitals, more than a few hundred trained nurses; now their number is estimated to exceed a hundred thousand, and the standard of qualification is steadily rising. To the development of that calling, and to the lifting of it to a higher professional place, the Johns Hopkins Hospital contributed powerfully. The training school for nurses was started simultaneously with the hospital itself, and it at once took a commanding position in its field, and had the effect of stimulating the growth, multiplying the number, and greatly raising the standard of training schools for nurses throughout the country.

"In this, as in other matters pertaining to modern progress, we take present advantages for granted, and are more prone to complain about their not being greater or more general than to dwell on their being in our possession at all."

We complain of the slow rate of progress—but is it really so slow as it seems when we stop to consider what has been accomplished in these twenty-five years? History is repeating itself—a little more than forty years ago women began pleading with cities and towns for the privilege of nursing their sick in hospitals. The privilege was granted slowly, reluctantly, and but a little at a time. Today we are asking the state to permit us to demand that the same work be better done, and our request is granted but a little at a time, though sufficient to make progress.

From the devotion of the women of forty years ago may we get our inspiration. May *we*, like them, have faith that devotion to our cause (which is ultimately better care for the sick) must be our one pure, passionate purpose that, with a continued effort, a regular effort, and a concerted effort, shall eventually bring success.

Again the Eight-Hour Law.

At the risk of appearing hard and unfeeling, as well as unprofessional, there are nurses who deplore any discussion on the subject of an eight-hour law in hospital training schools. The feeling is not engendered by want of sympathy for nurses who spend long and tedious hours in the wards of the hospitals while in training, but by the fear that the reduction in time may not be conducive to good training.

When it transpires that long and tedious hours must be spent with a patient in order that he may have the steady, persistent, continuous care so necessary for his restoration to health, will it be reasonable to expect that he will be given unstintedly the time required so long as the force of habit is against it?

The old-fashioned custom of considering the nurse a soldier had the advantage of giving the impression that, no matter what the exigency, hers "not to reason why," hers but to accomplish the task in hand, regardless of time and effort. While that is an extreme to be deplored today, it was a demand of the times that had to be met.

The eight-hour law in the hands of the unscrupulous or ignorant is a decided disadvantage, and might even be a backward move on the march toward higher standards. On the other hand, it might prove a blessing in disguise and an impetus toward higher ideals.

An eight-hour law, as such, is no particular benefit to anyone, whether he be a labor unionist or professional worker, unless the additional time thus put at his disposal be well spent. The average laboring man makes overmuch of his so-called rights in the matter; he does not spend the time to his advantage and has therefore cast aspersions on the whole system. The wise and thoughtful man makes good use of the additional hours, and for him it is a blessing.

The wise and thoughtful nurse will see in the plan an opportunity for improvement of herself and her condition, and to her it will be a benefit while in training. Just here one sees a necessity for a discriminating selection of pupils. It has long been known to superintendents of training schools that the well-bred and well-educated nurse has least to say about long hours and menial tasks—

she recognizes nothing menial, and the hours are none too long for the accomplishment of what is required. With this spirit she is safe, and, with a spirit of this kind prevailing, any school is safe, and to it the eight-hour law may be a blessing. If the same spirit goes with the nurse into private practice, no fragments of remembrances of an eight-hour day will hamper her usefulness. She is then a professional, and is not giving great consideration to time, but rather to usefulness and success.

Dr. S. Weir Mitchell expressed the idea that nursing could never be called a profession until those practicing it were willing to make everything subservient to the real needs of the sick—time, compensation, position—everything.

The conclusions to be drawn from the effects of this new law, and the evident desire for a pretty general practice of it, are:

1. It makes necessary a more careful selection of pupils and the maintenance of even higher standards in the schools.

2. The cultivation of a more truly professional spirit in the personnel of the schools.

Discomforts of the Unnecessary—Plea for Collarless and Bibless Uniforms for Nurses in the Summer Time.

BY MRS. J. E. COX, ROUND LAKE, NEW YORK.

Who started the custom of adding unnecessary accessories to the uniforms of workers in public institutions, or, more pertinently, who insists that these uncomfortable accessories shall be maintained in hot weather?

When all the rest of the feminine world is robed in thin, low-necked and short-sleeved dresses in an effort to be comfortable, the hard-working nurses in many hospitals and the attendants in various state institutions have to be neckbound with stiffly starched boardlike collars until every suffering neck has a well-defined "streak," that sometimes is almost a ridge, made by the irritating friction of the top edge of the collar against the flesh.

I have talked with different workers about it, and have found the expressions of discomfort universal, and I have also found some who confessed to discarding the collar a few minutes at a time for a respite, but always on the alert to replace it quickly at the approach of a superior officer. I personally knew of a woman working in a hot kitchen in a state institution, whose neck became extremely sore and blistered during a time of excessive heat because the wearing of the collar was a cast-iron rule. Wherein is the reasonableness or the need of this custom, so replete with discomfort?

Why should not the law of the uniform have as its largest factor for consideration the comfort of the wearer, and what interest is conserved (except that of the collar manufacturer) in making a hard-working girl wear through the sweltering summer a high, hard, hot, and air-impervious band around the neck? Could we assume the authority of a Portia, we would say, "Let the perpetrators of this requirement be brought to justice, and let them be convicted and sentenced to hard labor at a sweltering temperature for an indefinite period, with their necks incased in layers of starched linen, until they repent of their cruelty and learn to be humane, and in the process get an infusion of sympathy."

During the hot summer months, why should not the uniform be made with a comfortably low-cut neck, neatly finished with a band of white instead of the ever-required stiff collars? We venture the assertion that the style of uniform that now obtains of stiff collar and apron bibs of heavy muslin almost like an added waist was not designed by one who "came up from the ranks," but in some official sanctum where the consideration of appearance has been the ruling factor to the exclusion of comfort.

We know of an institution where the nurses are allowed to wear wide turn-over flat collars through the summer, but in the same institution the women attendants and general workers have to wear the stiff Roman collar, slanting in toward the top, with its cutting edge, and of course wearing long-sleeved uniforms, with a boardlike white cuff.

There are few places this side of an alleged purgatory where heat is more intense than in a steam drying laundry, yet we know that women superintending these rooms have to endure this heat, having to obey the required law of wearing the uniform just mentioned.

What a boon it would be to all these workers if some person in a place of power should have independence of spirit enough to cut loose from the traditions of the fashion that now obtains, and think of these workers as being made of flesh and blood, sweltering unnecessarily because of useless and uncomfortable accessories of uniform. Why should it not be reasonable that the neck be cut low and neatly finished for a summer uniform, the sleeve be made of elbow length, and the apron bibs (if they must be retained) made lower and narrower? A recognized uniform is a necessity, but there is no inherent virtue in stiffly starched linen, and a new style of uniform, like a newly fledged government, simply needs to be recognized by the "powers" to have all the authority and impressiveness of that which it has displaced. In the historical past a simple voice crying in the wilderness for the straightening of the way has wrought a reformation of greater import than that of mere physical comfort.

We are not out with banners for a great reformation, but simply voicing a sympathetic interest for uniformed wage earners, and wishing we might cause an arrest of thought that would lead to a change of summer attire, or more elasticity in the present requirements during the heated term, to the increased comfort of thousands of workers.

Where There Is No Shortage of Probationers.

A contemporary, in speaking of a hospital and its accessories, refers to its training school for nurses in terms of praise. It says it is one of those schools fortunate in having a long waiting list of desirable applicants simply because its fame has gone abroad. It acquired its prestige largely through its connection with the university college; it also at the same time gained that which made its pupils proficient in their own sphere—namely, good teaching and practice—but, besides all that, it has a recognized standing as a student body. The college professors and their families are as much interested in this branch of the work as in any other. The student nurses are well provided for in their nurses' home, have pleasant and comfortable rooms, are well supplied with periodicals and other good reading, and are altogether happy as well as useful.

The first cost of maintaining a training school in such manner is considerable, but not beyond the equivalent rendered, and is not to be compared with the sense of security for the care of the sick, who are the responsibility of the institution. It is the same old story, with perhaps a little different application—in common phraseology, "we get what we pay for." If we want a good article, we must pay the price. If we expect to get good women to train to be good nurses, we must meet the expense.

QUERIES and ANSWERS

More About the House Count.

To the Editor of THE MODERN HOSPITAL:

I thank you very much for your reply to my query with reference to the house count. After considering the matter, I am sure you are right in saying that according to our method we are taking credit for more than the actual number that pass through the house. The better way would be, as you suggest, to consider the stay two hospital days only in cases where the patient is in the house more than twenty-four hours.

I would say with reference to our charges, however, that, for the purpose of making the bill, we have always considered the day the patient was admitted and the day he was discharged as one day.

There is just one point about which there is still a question in my mind, and that is whether in giving the number of patients in the hospital on any certain day it is correct to give the number as taken by the midnight census plus discharges, provided day of admission and discharge is more than twenty-four hours, or whether the actual census should be taken as the number.

H. E. BISHOP,
Superintendent Robert Packer Hospital, Sayre. Pa.

It seems to me the house count should be taken once a day only, and should be an actual census of the patients present. It is taken at midnight, because that is the natural point of separation between two days. Barring emergencies, the house is settled down, and, even if a patient comes in at evening and leaves early in the morning, he will have had practically a "day's treatment"—a bed, clean linens, admission attention, and medical and nursing care, and the hospital should be credited for him.

But there will be in most hospitals that receive paying patients a small percentage of border-line cases which should be subject to individual treatment. In most hospitals the technic of discharge prescribes that the head nurse or someone acting for her take the house record of the patient to the office as soon as the order for his discharge is issued and before he leaves; this permits the clerk to make out the bill and to note any special charges or any deviation from the ordinary routine of the institution.

This sending of the record to the office as a warning that the patient is about to leave serves another excellent purpose. Sometimes a patient is discharged by his physicians, for whom special arrangements have been made with the office for getting him to his home without allowing him to go alone. Most of us have had experience with patients who set out alone for their homes, apparently in good condition, but who were overtaken on the way with a sudden seizure. Such a thing is extremely embarrassing, and difficult to explain at best. If perchance the office had been warned by the relatives of the possibility of such a contingency, and arrangements had been made for calling a cab or sending an orderly with him, no explanation would suffice. There will not be enough of these border-line cases to seriously upset the routine or to harass the bookkeeping department.

Methods in the Training School.

To the Editor of THE MODERN HOSPITAL:

We are about to reorganize our training school for nurses, including the rearrangement of its lecture staff. I would be greatly obliged to you if you would give me the benefit of your opinion concerning the proper organization of a training school for nurses in a manner to preserve its distinctiveness as one of the units of the general organization of the hospital of which it is a part. My opinion is that the training school for nurses of every hospital should be a separate and distinct unit, so far as organization and administration are concerned, and should be, therefore, under the direct supervision and control of the administrative branch, and responsible directly through the superintendent of the hospital to the board of trustees or its executive committee, and that, although connected with the visiting staff and lecture staff for professional instruction, it should be entirely independent of it in administrative and disciplinary measures, which should, in my judgment, be placed entirely in the hands of the superintendent of the hospital and superintendent of nurses.

1. In connection with the professional instruction of the pupil nurses, may I ask if there should be a lecture faculty, so-called, of the school, and to what extent, if any, should members of the visiting staff be connected with it?

2. Should there be a dean of this faculty; if so, does he present the candidates for graduation to the president of the hospital or to the chairman of the school committee at the commencement exercises of each class as it graduates; if not, who does?

3. At the examination of each class as it is advanced to the next grade, and at the final examination for graduation, who determines (after the markings of the examinations are handed in) the eligibility of the candidates for advancement or graduation—i. e., the lecture staff, the visiting staff, the superintendent of the hospital and principal of the training school, representing the training school committee, or the committee itself?

AN ADMINISTRATOR.

There is no doubt in my own mind that the training school should be considered as a distinct unit of the hospital, but it should be as closely related to the hospital as the bookkeeping department, or the kitchen, or any other unit that is necessary to the administration of the institution. The chief purpose of the hospital is to care for the sick, and the training school is one of the agencies by which this is done. The superintendent of the hospital is the responsible agent of the board of trustees concerning the primary purpose for which the hospital is conducted, and in my judgment he cannot be held to an accountability unless he has broad authority conferred on him by his board. Only in that way can the abilities of an administrator be measured and his greatest usefulness attained. The wise administrator will know how to use his authority, and, in so far as the training school is concerned, will exercise only a general supervision to see that patients are properly taken care of and that the teaching of the pupil nurses is properly done. No administrator can escape responsibility thus far.

The visiting medical staff should exercise no administrative functions in the hospital. If the patients are not properly nursed, if their orders are not properly executed, their recourse is to the superintendent of the hospital, and, if that official is unable to meet the demands, the final appeal is to the board of trustees itself. I see no good reason why a staff member may not go directly to the head of the training school for satisfaction concerning some dereliction or inefficiency in the nursing, but he has no right to hold the training school head responsible, except as better cooperation is often to be had by intimate touch between the people who are actually doing the work, as, for instance, the doctor, the intern, the head of the training school, and the pupil nurse. But the visiting doctor has no right to raise a row with any of these people; he should go directly to the superintendent if there is to be any unpleasantness.

1. I have some notions about the teaching of pupil nurses that are regarded by a good many leaders in nursing as unique and perhaps even obsolete. I don't think, for instance, that a pupil nurse can be properly trained unless some work in her training is given by the doctor whose patient she is taking care of. I don't believe that a nonmedical person, even though a teacher in the training school, is the best teacher for a nurse in the things that stand for medical care of patients, and I imagine that a great many teacher-nurses would agree with me in the main. The trouble is that the attending medical men have never the time, even if they have the inclination, to give that individual attention to the training of pupil nurses that is so necessary. I think that is the reason why, in a great many schools, the training school has practically despaired of getting any help from the medical staff in the training of nurses. The medical men simply will not give the time and attention and thought to the work that it requires, and the teacher-nurses are compelled to do the best they can without this help. I think the head of the training school, with the approval, or, rather, the cooperation and consultation of the superintendent of the hospital, should make up the teaching faculty of the training school, and that the training school committee should have the final approval of the result. With a wise and thoughtful superintendent and an experienced training school committee, the head of the training school will have some excellent counsel, and eventually some strong backing that she may need on occasion. I think that such studies as the fundamentals, anatomy, physiology, materia medica, surgery, and the principles of obstetrics and internal medicine (that is, the cause, course, and treatment of medical diseases) should be taught by the teacher-nurse. I think the medical faculty should give very short clinical courses of instruction on medicine, surgery, obstetrics, diseases of children, and the specialties; these should be taught in illustrated or clinical lectures when possible, but these lectures should be rather a finishing-off of the other courses taught by the teacher-nurse, and each lecturer who undertakes a course of this kind should know just exactly what the pupils have been over in their text-book work. If he is a good lecturer, he will be able to give them a vast amount of interesting and valuable information, and in a way that will leave an imprint on their minds. There are some medical men who have the proper viewpoint and who make most excellent teachers of the "ethics of nursing," but not every medical staff contains such a member, and, where there is not such a medical man available, the ethics of nursing will be better taught by the head of the training school.

2. In very few hospitals do the medical faculty members have anything to do with the examinations or the promotion of pupil nurses. Usually the head of the training school reserves all rights in this connection to herself. I am not sure but that she will do it better than the medical staff, because she is always in closer touch with the pupils than any of the medical men can be, and she usually is a better judge of their qualifications and capacity than the medical men are; and, moreover, she has the advantage of consultation with the head nurses in the respective services, who can tell her what she doesn't know at first-hand about each pupil; and, after all, it is not the girl who happens to be able to answer a particular set of questions the best who will make the best nurse or who will be entitled to promotion, but the girl who is doing her work throughout the year, text-book work and clinical work as well. I think the form of having the faculty of the school pass on the qualifications of nurses is all right, but the real, substantial, discretionary work of passing pupils along for graduation must always reside more or less in the head of the training school and her teachers and head nurses. This also answers your third proposition.

JOHN A. HORNSBY.

LETTERS TO THE EDITOR

Entertainments in Sanatoriums.

To the Editor of THE MODERN HOSPITAL:

I have read with much interest your editorial, "A Need in Tuberculosis Hospitals," in the November issue of THE MODERN HOSPITAL, and fully indorse everything you say. You have struck the keynote of success in the application of the treatment, but unfortunately, as you are already aware, this need is usually entirely ignored, or met in such a desultory way as to be of no effect.

My experience of more than ten years entitles me, I believe, to speak with some authority on the subject, and hence I make the unqualified assertion that entertainment, amusement, and instruction are as essential in the application of the modern treatment of tuberculosis as are properly equipped buildings, food, and good nursing. This is one of the factors which I early recognized as essential, and have gradually worked out a scheme which is proving successful in my institution, which is as follows:

I give the patients lectures, illustrated and otherwise, on tuberculosis at such intervals as will make it possible for each patient who remains for the usual length of time to hear these lectures at least once. I have enough stereopticon slides on tuberculosis to cover the time usually occupied at three lectures. I also have a question box, which is opened once a week, or as often as I find it profitable, which is governed by the number of questions asked. We have a small library, and would have a larger one but for the fact that it is difficult to cater to a miscellaneous lot of people, and I find that they usually prefer to provide their own reading matter; therefore the library does not cut very much of a figure. I have a moving picture entertainment once each week, excepting in the summer time when the weather is too hot to have the patients indoors. We observe all the holidays, making each celebration as attractive as possible. At irregular intervals, and particularly in the winter time, we have special entertainments, either by local talent in the community or such as the patients may provide for themselves in the way of private theatricals, musical entertainments, etc. We also have a good piano and a high-grade victrola, with a large assortment of records, great pains being taken to provide new records as they are produced. Formerly I had an orchestra at least once a week for Sunday dinner. We find that the victrola is a most excellent substitute, costs less, and comes more nearly providing continuous entertainment.

While it is impossible to relieve the patient entirely from the tedium of the treatment by reason of being compelled to leave one's home, yet I feel quite sure that, while experience may develop better methods than those which now obtain, we are meeting the situation in this respect probably better than any other institution in the country—not because of our peculiar facilities, but because the demand is not recognized.

I am not writing this letter with a view to exploiting my own work, but simply as an indorsement of your editorial, with a view to encouraging your further efforts along this line.

J. W. PETTIT.

Miss Katherine Harper, of Easton, Pa., has been made superintendent, and Miss Thompson, of Bellfonte, Pa., assistant superintendent of the Lewistown (Pa.) Hospital.

REVIEWS of NEW BOOKS

A Manual of Diseases of the Nose and Throat. By Cornelius G. Coakley, M. D., Clinical Professor of Laryngology in the College of Physicians and Surgeons, Columbia University, New York. New (fifth) edition. 12mo, 615 pages, with 139 engravings and 7 colored plates. Cloth, $2.75 net. Lea & Febiger, Philadelphia and New York, 1914.

This work has long been recognized as one of the most practical and useful manuals of laryngology in the English language. It touches on the pathology, simplifies and abbreviates diagnosis, and emphasizes the prescribed and approved methods of treatment. Coakley has always been recognized as a great teacher, and his work emphasizes the teaching quality, which gives the work an added value to undergraduates and junior students and to those clinicians who have not paid especial attention to the diseases of the air passages.

The Practitioner's Visiting List for 1915. Four styles—weekly, monthly, perpetual, sixty-patient. Pocket size. Substantially bound in leather, with flap, pocket, etc. $1.25 net. Lea & Febiger, Philadelphia and New York.

The 1915 Practitioner's Visiting List is like its predecessors—always an advance. It is not only a visiting list, with blanks for names and dates and results, as well as for charges and financial operations by days, weeks, and months, but it is as well an encyclopedia of important things. Among the most interesting features is a therapeutic reminder, with dosage, and approved methods of treatment for the various classes of diseases. There is, in addition, a dose table of the principal preparations from the pharmacopeia; there are the poisons and antidotes; methods for the resuscitation of those who have been overcome by accident, such as drowning, electrical shock, etc. One of the most convenient features is a table of signs, to be used in connection with the memorandum pages. It is a most important little book aside from the 200 pages for notes.

A Treatise on Diseases of the Nose, Throat, and Ear. By William Lincoln Ballinger, M. D., Professor of Laryngology, Rhinology, and Otology in the College of Physicians and Surgeons, Chicago. New (fourth) edition, thoroughly revised. 8vo, 1080 pages, with 536 engravings, mostly original, and 33 plates. Cloth, $5.50 net. Lea & Febiger, Philadelphia and New York, 1914.

This new edition of a most important work bears evidence of careful revision, and the inclusion of many new methods and whatever has been learned about diseases of the nose, throat, and ear in recent years. The colored plates and illustrations generally are a most important feature of this new edition. For instance, there are thirteen original colored plates to illustrate the physiological and pathological manifestation of nystagmus, and twelve drawings to illustrate the Newmann and Hinsberg labyrinth operations. Dr. Ballinger has entirely rewritten the section on functional tests of hearing; otosclerosis has been entirely revised and brought down to date; Haynes' operation on the cisterna magna is fully described, with drawings to illustrate the technic. There is a carefully prepared chapter on salvarsan and its uses in the treatment of syphilis of the brain and auditory nerve. The new volume is 100 pages larger than the previous edition, and there are many more new illustrations. Altogether it is a most important contribution.

Blood Pressure—Its Clinical Applications. By George W. Norris, A. B., M. D., Assistant Professor of Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital; Assistant Visiting Physician to the University Hospital; Fellow of the College of Physicians of Philadelphia. 8vo, 372 pages, with 98 engravings and 1 colored plate. Cloth, $3.00 net. Lea & Febiger, Philadelphia and New York, 1914.

The importance of blood pressure in diagnosis, prognosis, and treatment is becoming more widely recognized every day, and with this recognition has come the creation of a literature devoted to this special field. Dr. Norris' work is among the latest contributions to this literature. He has presented his subject in condensed and practical form, and as definitely as the state of our present knowledge will permit. His indices and chapter headings render the work highly valuable for reference purposes, and he seems to have had the happy faculty of coordinating abstract discussion of chemical and physiological principles with clinical findings.

The science of medicine is none too well informed concerning the essence of blood pressures, especially as these pressures operate in specific diseases. Undoubtedly we are to learn very much more in the near future concerning physiological action in the blood stream and of the heart, and we are to make far greater use of departures from the normal in the diagnosis and treatment of various diseases, and Dr. Norris has helped us in these studies in a most wonderful way.

Nervous and Mental Diseases. By Joseph Darvin Nagel, M. D., Consulting Physician to the French Hospital of New York; Member New York Academy of Medicine; Honorary Member Societe Royal de Belique, etc.; Physician to St. Chrysostom's Dispensary. New (second) edition, revised and enlarged. 12mo, 293 pages, with 50 engravings and a colored plate. Cloth, $1.00 net. The Medical Epitome Series. Lea & Febiger, Philadelphia and New York, 1914.

It must have been a huge task to review the enormous literature on the various phases of nervous diseases, and how much greater task it must have been to select the true from the false and to incorporate it into a work of less than 300 pages.

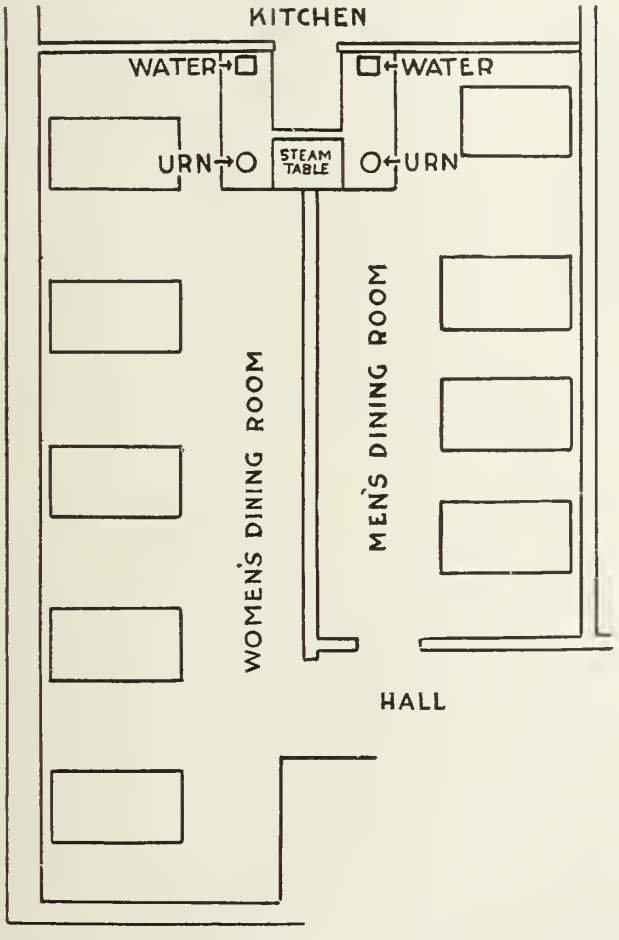
It is always refreshing for one to pick up a treatise on any medical subject and find it properly arranged, so that a great amount of time need not be spent in finding what one wants. In Nagel's work the arrangement has been almost an inspiration. He has emphasized everywhere the highlights; his definitions are simple and plain, so that a junior student may understand, and at the same time the carefulness of expression will appeal to the profoundest student of the literature, and even a greater emphasis is placed on vital parts by a series of questions at the end of each chapter, calculated to review before the reader's mind what he has gone over. There are a great many excellent illustrations and photographs and charts, a few in colors. Altogether, this epitome will save the busy practitioner an immense amount of reading and at the same time give him the very latest information on all topics concerning diseases of the nervous system and border-line cases.

THE HOSPITAL KITCHEN

Cafeteria Service in Hospitals—Rochester General Has Employed Self-Helping Method in Dining Room for Past Three Years—System Works Admirably.

BY MISS MARY L. KEITH, SUPERINTENDENT ROCHESTER GENERAL HOSPITAL.

The form of service practiced in our employees' dining rooms for the past three years is perhaps too casual to be dignified by the name of cafeteria, but, simple as it is, it works well. The two dining rooms, one for men and one for women, are adjacent to the kitchen, but not connected with it. They are separated from one another by a partition, but served from the same counter, which in



the form of a hollow square extends into both rooms. The entrance to the dining rooms is off a main hall at the opposite end (Fig. 1).

Each place at table is set; bread and butter, sugar, condiments, perhaps the dessert at noon and the sauce at night, and whatever else is to be eaten cold, is placed on the tables early, as only hot food is served over the counter, the broad side of which is occupied by a steam table. The meat is kept hot in the center compartment of the table, vegetables and soup on either side, and plates in the compartment below. The side counters, one in each room, are duplicates, with tea or coffee in an urn, with spigot, over a gas burner, and cups stacked beside it. Glasses are on shelves beside the running water.

At meal time one woman stands inside the 4-foot hollow square, and each person who enters the dining room goes to the counter, states his desire for much or little, and, while it is being put on his plate by the one server, he draws his tea, coffee, milk, or water, and then, with cup and saucer in one hand and plate in the other, goes to his place at table. Soup is served in a low bowl, and the plate set on top of it. After eating, each person stacks his empty dishes and returns them to the counter, which is only a step removed from the dish washer. This return of soiled dishes as part of the routine was adopted without a dissenting murmur, and is a feature much appreciated by the head of the department.

Waitresses eat their dinner at 11:30, other women employees at 11:50, the majority of the men at 12:00, followed by a small group at 12:30. This coming in relays makes it possible for one person to serve all, and by 1 o'clock 60 employees have eaten and gone, the tables have been cleared, and the dishes washed. Breakfast and supper are even more expeditious than dinner.

Before this system was introduced the cook and the kitchen help had their special table in the kitchen, and it was the cook and one other who objected to going to the common dining room and eating "that way," but after a little unpleasantness they yielded, and there has since been no trouble and no adverse criticism. Older employees, when asked, say they much prefer the present way.

We still have some waste of food, because we have always a few persons who demand more than they eat, but on an average they eat more and waste less than formerly. There is no saving in the amount of food consumed, but the employees look well fed, grumble less, have less sickness and better general health.

The system was adopted because, as the hospital grew and the number of employees increased, they required more service than we could afford to give, and, even with service, the dining rooms were disorderly, and food was not only wasted, but was carried from the room in considerable quantities.

Provision on a larger scale would have been made for this form of service if we could have foreseen what a success it was to be, and we have already regretted that we did not abolish ordinary tables with cloths and substitute tables with Carrara glass tops.

The Cafeteria Principle in Hospitals—Wide Selection of Foods Is Allowed—Waste Is Minimized and Service Costs Lowered.

The new General Hospital in Cincinnati is preparing for something similar to the Rochester arrangement for its help, and cafeteria on a more elaborate scale is being installed in the Cleveland City Hospital. Consequently it seems timely to discuss the question of the introduction of cafeteria service for the entire hospital staff instead of the waiter service now in general use.

As to the question whether the hospital staff would prefer the cafeteria system to the present system, one can consider it only a fair sample of the wants of the general public. Now the general public has declared most emphatically that it likes the cafeteria service. In every city

the cafeterias are daily growing in number and popularity, and large sums of money are being profitably invested in their equipment. Therefore it is reasonable to suppose that, given the same service, the hospital staff will take to cafeteria service the same as the general public has taken to it.

But to achieve this popularity, the hospital cafeteria must conform as far as practicable to the rules which have made the commercial cafeteria a success. The hospital equipment should be patterned after that of the commercial cafeteria, and its counter should contain an approximately equal variety of viands, as temptingly put before its patrons as the commercial cafeteria puts before its public.

The psychology of the success of the cafeteria is the preference of every person to see what they are offered to eat before choosing what they want. On the cafeteria counter are spread out soup, fish, meats, entrees, salads, puddings, pies, fruits, bread, rolls, biscuits, and, armed with a tray, one starts down the counter, letting one's eye roam over the viands displayed, choosing those which appeal, that day, to the taste.

Seeing what is most tempting to the appetite on that particular day, and being able to determine what one wants by sight, is the main reason why cafeteria service is popular, even though it involves self-service.

It will be found that by skillful cafeteria catering which is pleasing the eye and tempting the appetite with low-cost, dainty dishes, the general cost of feeding the staff can be reduced, and at the same time the general satisfaction of the staff with the catering will be greater because each one has chosen what he wants as far as the selection will permit.

A proper service equipment for a cafeteria should consist of a counter, which may be straight or L-shaped, as occasion demands. This counter should be all metal, and faced with white enamel and painted with white enamel inside. The feet should raise it 10 inches above the floor to allow easy cleaning.

The top of the counter should contain a steam table, with white enamel top and a bain-marie, and either a carrara glass or marble slab for pastry, etc., and an ice pan for fruits and other things requiring to be kept cold. Coffee urns should be at the back of the counter or on it at the end. A small sink should be provided, and a tray stand at one end. Along the front of the counter should be three oval-shaped brass or polished steel bars, along which the trays can be slid, and a brass railing should be placed in front of the counter to keep the people in line. Provision for ice water and tumblers should be at one or more convenient points in the room.

Naturally only the larger class of hospitals will be able

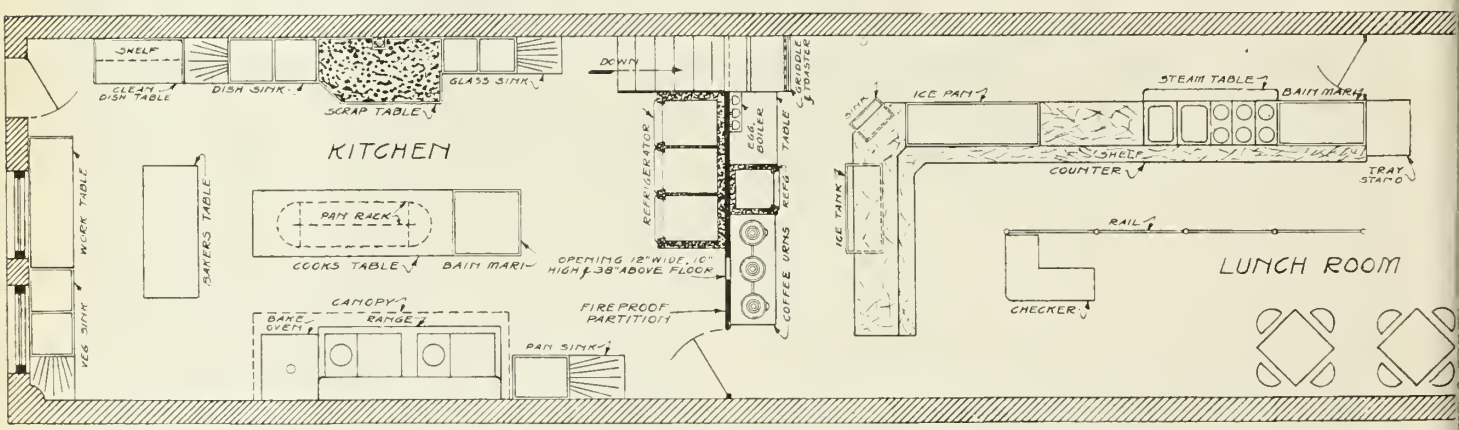


Diagram of self-serve equipment at Cincinnati, Ohio.

It is the experience of cafeteria owners that the public taste varies enormously—one tray will be filled mostly with sweet stuff, another with vegetables, spaghetti, and fruit, on all of which the profit is largest, while another will take roasts, on which the profit is small, and therefore some cafeteria owners place the sweets at the entrance end of the counter before the meats in order to have the public take the sweets and possibly eschew the meats.

These profits would be represented by savings in the hospital's expense. Employees who do not feel hungry will take light things and probably forego meat, while under the present system the meat would be brought on the table and wasted. Ladies like salads and good pies, cakes, and pastry, and it will be found that the hospital staff will, just as the general public does, choose its meal from day to day in a way that will practically do away with waste.

Tables in the dining rooms should have carrara glass tops, because they can be easily kept clean. Attendants in the staff dining rooms should be provided to take away the dishes. The household help should be made, as at Rochester, to return the empty dishes themselves, but their tables should also be glass.

to get the benefit of the cafeteria system because the system is only applicable to comparatively large numbers of people. A system such as the Rochester system will doubtless be found to work well for the household help where even only thirty or forty are employed; but for the staff, the larger the number the greater variety of food that can be provided, and the greater the success from the standpoint of giving satisfaction, and at the same time reducing expenses by the reduction of the meat bills and the waste of uneaten dishes.

A complete cafeteria equipment has been installed at the Cincinnati University, and a course of training in cafeteria work is being given students by the practical work of catering for and serving about 900 paying patrons per day. These students are working so as to make themselves eligible for cafeteria positions, and no doubt will be suitable for such positions in hospitals, especially if they have supplemented the university course by some experience in cafeterias patronized by the general public. Similar training at other universities will provide attendants of the class demanded by hospitals.

A plan for an Italian hospital has been launched in Pittsburgh.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Let us begin now to think about a change in the nurses' uniforms for next summer. High, tight, stiff collars, stiff cuffs, and otherwise dress-parade harness are not conducive to whole-hearted, unselfish service. Even the soldier has a fatigue service uniform—why not the nurse, who is also a soldier?

Mr. Shilliday tells a story of an Arab sheik who, when asked the population of a town, responded, "Allah alone knows," and when he was asked about the number of deaths and the sanitation of the place replied, "It would be impious to inquire." It seems there are some Arab sheiks running hospitals in this country.

If you have rats, get rid of them. There are probably only three or four places where they can enter the premises. First go after these places and stop them—yes, you can; then set traps, set poisons, cover their holes with cement, pour dry slaked lime into their runways, starve them—fight them day and night. A rat is a disgrace to a hospital, so are cockroaches, so are mice—all of them are infection carriers—and they are unnecessary.

A noisy office and a noisy superintendent breed a noisy hospital. Grown people, like little children, play at "follow the leader." A quiet, gentle, dignified deportment on the part of the superintendent is one of the most highly communicable infections imaginable; but it is a vaccine, and everybody ought to be inoculated. I know a superintendent who goes through his institution with his hat on and a cigar in his mouth; his hospital is like an out-patient department of Bedlam.

About 75 percent of your employees would do more for you if you encouraged them and brought out their latent talents. Most people have a talent for something or other—why not experiment a little with your hospital family and develop the individual members along their most responsive lines? One of the most ingenious "handy" men I ever knew mopped the halls for two years until one day I started to fix something that developed into a rather dirty job. He was the silent man of the hospital, and I was surprised when he asked me to let him do it. That man is now master mechanic of a 500-bed hospital, and everybody has an abiding faith that there is nothing under the sun that he can't do.

Every sixty extra steps taken by a nurse is a minute wasted. Minutes run into hours, and hours run into money. It won't do to say, "Oh, well, we don't pay our pupil nurses much of anything; their service is cheap." If you don't suffer, your patients do, because they will get less attention, and attention to patients is what you and the hospital and the nurses are there for. Every inconvenience might just as well be a high fence for nurses to climb over on their way from place to place. Think of a 6-foot fence every few feet, and then compare these fences to your barriers in the shape of little time-consuming, nerve-tiring inconveniences. Better remove some of the fences.

Well-kept, white-enameled furniture inspires everybody to keep things neat in the ward; but when you enamel your furniture, give yourself plenty of time. Articles should be out of service ten days or two weeks. There is some scraping to be done and sandpapering down of the first two coats, and enamel takes time to dry. Half a dozen extra beds and a few extra pieces of other articles will allow you to go through the house gradually. Badly done furniture breeds "a lick-and-a-promise" spirit all over the house. "Like master, like man." If a bad job is good enough for the superintendent to turn out, a poor job gets to be the rule.

There is no reason why the maids and orderlies and the housemen should not be in uniform, and there is every reason why they should be. Nothing looks so slovenly in the hospital as untidy maids and men going about in all sorts of heterogeneous garb. It is impossible for these people to wear good clothes at their work, and the only alternative is to have them wear inexpensive uniforms of some sort. Good denim, or khaki, or overall stuff makes a good uniform, especially if the garments have bright buttons. Maids can at least wear long-sleeved, long-skirt aprons of some uniform figure. These uniforms will save their own clothing, and make employees look very much better and more in harmony with an otherwise clean and neat hospital.

There is a man in Buffalo, and Cleveland, and Detroit named E. M. Statler. He owns a hotel in each of the three cities, and his hotel is the best one in its city. "Well," you say, "suppose you are right; what has Statler to do with hospitals? And what is a good hotel to us?" A whole lot. Statler got out what he pleased to call a "code" awhile back. It consists of pointed paragraphs of advice to his employees, and there is more good, hard, sound sense in it that applies directly to hospitals than in any code of hospital rules ever written. "Hotel Statler is operated primarily for the benefit and convenience of its guests; without guests, there could be no Hotel Statler," begins the Statler code. This seems to be a reasonable statement, and is possessed of some of the elements of truth. Now, suppose we substitute the word "patients" for "guests"—Doesn't it pretty snugly fit hospitals? "A hotel has just one thing to sell; that one thing is service," says Statler. "A hotel that sells good service is a good hotel; a hotel that sells poor service is a poor hotel." Isn't there something about this proposition that makes it fit hospitals? "The service of a hotel is not a thing supplied by any single individual. It is not special attention to any one guest. Hotel service—that is, Hotel Statler service—means the limit of courteous, efficient attention from each particular employee to each particular guest. This is the kind of service a guest pays for when he pays us his bill—whether it is for $2 or $20 per day. It is the kind of service he is entitled to, and he need not and should not pay any more. Every guest who enters the Statler door comes in there because he believes he can buy something there better than he can buy it anywhere else. It rests with every employee of this hotel—doormen, bellboys, porters, clerks, waiters, maids, manicurists, and managers—whether he goes away disappointed or pleased." Suppose it is a free patient we are thinking about—a "pauper" if you please; somebody is paying that $2.00 per day for him, or you wouldn't keep open very long. Isn't he just as much entitled to courtesy and consideration as though he were paying it himself? Who is this hotel man, that he should have higher ideals than a hospital administrator?

Kindergarten classes at which dancing will be taught as an exercise in physical culture; a schedule of special medical lectures free to the general public, which are to be given by noted specialists who have volunteered their services; and a new department in mother and baby welfare work in the establishment of a pre-natal clinic, will be three innovations in hospital activity to be introduced in Philadelphia during the coming winter by the Children's Homeopathic Hospital.

PRESIDENT MANN ANNOUNCES COMMITTEES.

Head of the American Hospital Association Distributes Work for the Coming Year.

President William O. Mann, of the American Hospital Association, has appointed the following committees for 1914-1915:

Executive Committee—Dr. H. T. Summersgill, superintendent University of California Hospital, San Francisco, Cal.; Dr. William R. Dorr, superintendent St. Luke's Hospital, San Francisco, Cal.; Dr. R. G. Broderick, health officer, San Francisco, Cal.; Dr. Arthur A. O'Neil, superintendent Isolation Hospital, San Francisco, Cal.; Dr. Theodore Olmsted, superintendent Samuel Merritt Hospital, Oakland, Cal.; Miss A. A. Williamson, R. N., California Hospital, Los Angeles, Cal.

Membership Committee—Mr. O. H. Bartine, superintendent Hospital for Ruptured and Crippled, New York City; Mr. Howell Wright, superintendent City Hospital, Cleveland, Ohio; Dr. J. McLean Moulder, superintendent Methodist Hospital, Indianapolis, Ind.

Committee on Constitution and By-Laws and Committee on Development of the Association—Mr. Richard P. Borden, trustee Union Hospital, Fall River, Mass.; Dr. H. B. Howard, superintendent Peter Bent Brigham Hospital, Boston, Mass.; Mr. Daniel D. Test, superintendent Pennsylvania Hospital, Philadelphia, Pa.; Dr. A. B. Alexander, superintendent Winnipeg Municipal Hospital, Winnipeg, Man.; Dr. Louis B. Baldwin, superintendent University Hospital, Minneapolis, Minn.; Miss Laura E. Coleman, superintendent Homeopathic Hospital, Buffalo, N. Y.

Auditing Committee—Mr. Reuben O'Brien, superintendent Manhattan Eye, Ear, Nose, and Throat Hospital, New York City; Mr. G. W. Olson, superintendent Swedish Hospital, Minneapolis, Minn.; Dr. Arthur A. O'Neil, superintendent Isolation Hospital, San Francisco, Cal.

Nominating Committee—Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich.; Dr. John A. Hornsby, editor THE MODERN HOSPITAL, Tower Building, Chicago, Ill.; Dr. A. B. Ancker, superintendent City and County Hospital, St. Paul, Minn.

Committee on Hospital Efficiency, Hospital Progress, and Hospital Construction—Dr. Joseph B. Howland, assistant administrator Massachusetts General Hospital, Boston, Mass.—medical organization and education; Dr. H. M. Pollock, superintendent Norwich Hospital for the Insane, Norwich, Conn.—hospital construction; Miss Lucia Jaquith, superintendent Memorial Hospital, Worcester, Mass.—hospital finances and cost accounting; Dr. C. D. Smith, superintendent Maine General Hospital, Portland, Me.—efficiency and progress.

Committee on Noncommercial Exhibits—Miss Lydia H. Keller, St. Paul, Minn.; Miss Mary E. L. Thrasher, superintendent Robert Bent Brigham Hospital, Boston, Mass.; Miss Elizabeth F. Miller, superintendent Flushing Hospital and Dispensary, Flushing, N. Y.; Mr. G. W. Olson, superintendent Swedish Hospital, Minneapolis, Minn.; Miss A. A. Williamson, R. N., California Hospital, Los Angeles, Cal.

Committee on Out-Patient Work—Mr. Michael M. Davis, Jr., Ph. D., director Boston Dispensary, Boston, Mass.; Dr. Andrew R. Warner, acting superintendent Lakeside Hospital, Cleveland, Ohio; Dr. Joseph B. Howland, assistant administrator Massachusetts General Hospital, Boston, Mass.; Dr. Willis G. Nealley, superintendent Brooklyn Hospital, Brooklyn, N. Y.; Dr. R. B. Seem, assistant superintendent Johns Hopkins Hospital, Baltimore, Md.; Mr. G. W. Olson, superintendent Swedish Hospital, Minneapolis, Minn.; Miss Elizabeth F. Miller, superintendent Flushing Hospital, Flushing, New York.

Committee on Legislation—Dr. Wayne Smith, superintendent Harper Hospital, Detroit, Mich.; Dr. O'Hanlon, superintendent Bellevue and Allied Hospitals, New York City; Dr. H. O. Collins, superintendent City Hospital, Minneapolis, Minn.

Special Committee on the Inspection, Classification, and Standardization of Hospitals—Dr. J. A. Hornsby, editor THE MODERN HOSPITAL, Tower Building, Chicago, Ill.; Dr. Henry M. Hurd, secretary Johns Hopkins Hospital, Baltimore, Md.; Dr. Frederic A. Washburn, administrator Massachusetts General Hospital, Boston, Mass.

Committee to Consider the Grading and Classification of Nurses—Miss Charlotte A. Aikens, Trained Nurse and Hospital Review, Detroit, Mich.; Miss Emma A. Anderson, superintendent New England Baptist Hospital, Boston, Mass.; Miss Ida M. Barrett, superintendent U. B. A. Hospital, Grand Rapids, Mich.; Dr. R. W. Bruce Smith, inspector of hospitals and charities for Toronto, Ont.; Dr. William O. Mann, superintendent Massachusetts Homeopathic Hospital, Boston, Mass.; Dr. R. R. Ross, superintendent Buffalo General Hospital, Buffalo, N. Y.; Dr. Thos. Howell, superintendent New York Hospital, New York City.

Publication Committee—Dr. H. A. Boyce, superintendent Kingston General Hospital, Kingston, Ont.; Dr. J. N. E. Brown, superintendent Detroit General Hospital, Detroit, Mich.; Dr. E. H. Young, assistant superintendent Rockwood Hospital, Kingston, Ont.

Special Committee on Bureau of Hospital Information—Dr. Winford H. Smith, superintendent Johns Hopkins Hospital, Baltimore, Md.; Dr. S. S. Goldwater, commissioner of health, New York City; Dr. Henry M. Hurd, secretary Johns Hopkins Hospital, Baltimore, Md.; Dr. John O. Skinner, superintendent Columbia Hospital, Washington, D. C.

Committee to Study the Character, Cost and Value of Direct and Indirect Work for the Prevention of Diseases now Conducted by Hospitals and Dispensaries, to Arrange in the Order of Their Importance and Practicability Successive Steps for the Extension of Such Work, and to Prepare Methods for Its Financial Support and for Its Correlation with the Similar Work of Other Agencies, Public and Private—Dr. J. A. Hornsby, editor THE MODERN HOSPITAL, Tower Building, Chicago, Ill.; Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich.; Mr. Sidney E. Goldstein, director Free Synagogue, New York City; Miss Charlotte A. Aikens, Trained Nurse and Hospital Review, Detroit, Mich.; Mr. Michael M. Davis, Jr., Ph. D., director Boston Dispensary, Boston, Mass.

Committee to Memorialize Congress to Place Hospital Instruments on the Free List—Rev. Geo. F. Clover, superintendent St. Luke's Hospital, New York, N. Y.; Rev. A. S. Kavanagh, D. D., superintendent Methodist Episcopal Hospital, Brooklyn, N. Y.; Dr. J. N. E. Brown, superintendent Detroit General Hospital, Detroit, Mich.; Dr. W. L. Babcock, superintendent Grace Hospital, Detroit, Mich.; Dr. W. H. Smith, superintendent Johns Hopkins Hospital, Baltimore, Md.

Committee to Consider the Suggestions in Dr. Howell's Paper—Dr. Robert J. Wilson, superintendent, Health Department Hospitals Willard Parker Hospital, New York City; Dr. C. H. Young, superintendent Presbyterian Hospital, New York City; Dr. Frederick Brush, superintendent Burke Convalescent Home, New York City.

ORGANIZATION AND ASSIGNMENT OF RED CROSS WAR UNITS.

Who the Surgeons and Nurses Are and Where They Are Supposed to Be Working.

Below is given a list by units of those composing the American Red Cross relief expedition, which sailed on the "Mercy Ship" in September to assist in caring for the wounded from the battle fields of Europe. The cities from which the surgeons and nurses were enrolled are mentioned and their present location indicated according to the latest information available. In each case the surgeon first named is the medical director of the unit, and the nurse first named is the supervisor.

AT PAIGNTON, ENGLAND.

Unit D.—Surgeons: Robert W. Hinds, Medical Corps National Guard of New York, Buffalo; Fred W. Eastman, intern, Harlem Hospital, New York City; Henry M. Shaw, intern, Johns Hopkins Hospital, Baltimore. Nurses: Beatrice Bowman, Navy Nurse Corps; Virginia A. Rau, Edna Reese, Elizabeth I. Welsch, Margaret A. Strycker, Margaret Hennessey, Buffalo, N. Y.; Jessie T. Parsons, Elizabeth Weber, Adeline Thomas, Eleanor M. Scott, Minnie Mason, all of Rochester, N. Y.; Emma Evers, Connecticut.

Unit F.—Surgeons: Howard W. Beal, Worcester, Mass.; V. N. Leonard, resident surgical staff Johns Hopkins Hospital; William T. Fitzsimmons, resident surgeon Roosevelt Hospital, New York City. Nurses: Donna G. Burgar, Boston City Hospital, Margaret A. G. Hickey, Maybelle S. Welsh, Louise A. Bennett, Mary T. McCarthy, Anna Agnes Corney, Kathryn J. Ulmer, Ellen T. Riley, Anna S. Barclay, Grace K. Perkins, Frances B. Latimer, all of Boston; Nellie M. Strong, Connecticut.

Both of the English units have finally been stationed in the American Hospital in Paignton, with Dr. Beal in charge. This hospital has about 350 beds. Unit D spent some time in the Haslar Royal Naval Hospital at Gosport. It has been decided to send an additional force of two surgeons and six nurses to join the English contingent.

AT PAU, FRANCE.

Unit A.—Surgeons: Reynold M. Kirby-Smith, health officer of the University of the South, Sewanee, Tenn.; John A. C. Colston, Johns Hopkins Hospital; M. H. Todd, Johns Hopkins Hospital. Nurses: Margaret Lenmann, superintendent Philadelphia Visiting Nurse Society; Mary Graham, Anna M. Goertz, Faye L. Fulton, Florence M.

Snyder, Anna C. Lofvring, Leslie Wentzel, Agnes M. Jacobs, Mary A. Mulcahy, Mary C. McNelis, Martha L. Henderson, Emma B. Loose, all of Philadelphia.

Unit B.—Surgeons: Roades Fayerweather, Johns Hopkins Medical School; Lewis C. Spencer, assistant resident surgeon Johns Hopkins Hospital; H. C. Slack, Johns Hopkins Hospital. Nurses: Alice E. Henderson, assistant superintendent Detroit General Hospital; Mary M. Boyle, Margaret W. McGary, Florence M. Waters, Grace D. Barclay, Rebecca Watson, Sydney A. Lewis, Elizabeth W. Riffel, Helen Coney, Sara W. Crossley, Valeti Case, Martha Hartman, all of the Baltimore district.

At last reports both units assigned to France were stationed in a large hospital at Pau, a mountain resort near Bordeaux.

IN RUSSIA.

Unit C.—Surgeons: Wm. S. Magill, Medical Reserve Corps U. S. A., New York City; Philip Newton, Paul H. Zinkhan, Washington, D. C. Nurses: Lucy Minnigerode, Mary F. Farley, Frieda L. Hartman, Blanche Horner, Helen Linderman, Helen G. Northwood, Sophia V. Kiel, Rachel C. Torrence, Emogene E. Miles, Maud H. Metcalf, R. Lee Cromwell, Henrietta K. Koochlein, all of New York City.

Unit H.—Surgeons: Edward H. Egbert, Washington, D. C.; Brown S. McClintic, Peru, Ind.; Arthur M. Zinkhan, Washington, D. C. Nurses: Charlotte Burgess, assistant superintendent Illinois Training School for Nurses; Eva L. Doniat, Alice Gilborne, Alma E. Foerster, Martha M. Moritz, Mary E. Hill, Charlotte Eaton, Anne Hansen, Edwina Klee, Gertrude G. Hard, Julia S. Schneider, Mary F. Bowman, all of Chicago.

The Russian units were originally assigned to Kiev, back of the Russian army which was attacking Austrian Galicia, but up to a few days before THE MODERN HOSPITAL went to press no late information regarding the location of these units had been received at Red Cross headquarters.

Miss Helen Scott Hay, general directress of nurses, is with the units in Russia.

AT BUDA-PEST, AUSTRIA.

Unit E.—Surgeons: Charles McDonald, New York City; Russell A. Jewitt, Cleveland, Ohio; John C. Miller, Shenandoah, Pa. Nurses: Alice C. Beatle, Ava P. Mautner, Clarabel Schofield, Katherine Volk, Mollie McKenney, Margaret McGuire, Minnie Bowman, Rosina Volk, Clara P. Reynolds, Nettie Eisenhard, Grace Bentley, Katrina Hertzer, all of Cleveland.

AT VIENNA, AUSTRIA.

Unit K.—Surgeons: Carl A. Snoddy, superintendent Knoxville General Hospital, Knoxville, Tenn.; Fred G. Benton, Manhattan State Hospital, New York City; Walcott Denison, St. Louis, Mo. Nurses: Elizabeth Dooley, Jewish Hospital, Cincinnati, Ohio; Mary E. Minshall, Ella Weinmann, Lulu B. Martin, Cynthia Richardson, Anna Sutter, Margaret J. Leonard, Ella Kathleen Hoff, Anna Domershausen, Bertha M. Butterfield, Margaret Bodkin, all of Cincinnati; Genevieve Dyer, of Chicago.

AT KOSEL, GERMANY.

Unit G.—Surgeons: Bial F. Bradbury, chief surgeon National Guards of Maine, Norway, Me.; R. H. Newman, Knoxville General Hospital, Knoxville, Tenn.; John Lancer, Fordham University Clinic, New York. Nurses: Frances G. Meyer, New York Lying-In Hospital, New York City; S. Louise Stone, Hattie B. Moore, Grace Gilday, Linna K. Meirs, Margaret B. Purvis, Ellen Jane Thomas, all of New Jersey; Lillian L. Halliday, Alice B. W. Weston, Sarah A. McCarron, Esther Rosenberg, Louise E. Siegel, all of Brooklyn, N. Y.

This unit, at Kosel, in Silesia, is attached to a military hospital of 800 beds.

AT GLEIWITZ, GERMANY.

Unit I.—Surgeons: Charles H. Sanders, resident surgeon Garfield Memorial Hospital, Washington, D. C.; J. F. Spearman, Mercy Hospital, Baltimore; Grover A. C. Stem, Washington, D. C. Nurses: Anna L. Reutinger, Directress of Nurses New York Lying-In Hospital; Mary M. A. Weiss, Caroline W. Bell, Bertha M. Becht, Mary A. Brownell, Dorothea Mann, Claudia M. O'Neil, Lulu M. McEnany, all of New York City; Reba J. Taylor, Clarice Buhrman, Harriet T. Hankins, Helena A. Fitz, all of Washington, D. C.

Unit I, at Gleiwitz, Silesia, is only thirty miles from Kosel, where Unit G is located.

IN SERVIA.

Unit J.—Because of the impossibility of reaching Servia except by way of the Mediterranean, the Servian unit shipped on a Greek liner. Surgeons: Edward W. Ryan, James C. Donovan, William P. Ahern, all of New York City. Dr. Ryan spent the last two years in Mexico in connection with the work of the American and Mexican Red Cross societies. Drs. Donovan and Ahern were house surgeons at the Fordham Hospital. Nurses: Mary E. Gladwin, superintendent Akron (Ohio) Visiting Nurses' Association; Helen L. Kerrigan, Mary F. Keller, Esmee Everad, Helen L. Smith, Brooklyn, N. Y.; Anna Hirsbrunner, Agnes J. Gardner, New York; Augusta M. Condit, Nell F. Steel, Columbus, Ohio; Stella May Hall, Albany, N. Y.; Ida F. Lusk, Helen L. Latimer, New York.

Two additional units were expected to sail for Servia on the steamer Finland November 17. One of these units includes Dr. Ethan Flagg Butler, Rochester, Minn.; Dr. S. H. Hodge, Knoxville, Tenn.; Dr. James F. Donnelly, Stapleton, N. Y. With the other unit are Dr. E. P. Magruder, Glendale, Md., Drs. Clapham P. King, Morton P. Lane, Washington, D. C.

PATIENT'S DEATH DUE TO NURSES' STRIKE.

Nurses Quit in Middle of Surgical Operation—Patient Died —Is This Possible?

A special dispatch to the Cincinnati *Enquirer* and other papers, sent out on November 9, tells the following story, which is published for what it is worth, as it is inconceivable that its statements can be true without some mitigating explanation:

Orin Day Pomeroy, whose home was at College Point, and who was operated on for appendicitis at the Flushing Hospital a week ago, at the time the nurses in the hospital went on a strike, died in that institution today.

Pomeroy was on the operating table under the influence of an anesthetic, and the operation, performed by Dr. C. Story, was under way, when the three nurses assisting the operating surgeon left the room.

Dr. Story was greatly embarrassed by the desertion of the nurses, and had to call in other physicians at the hospital to do the nurses' work to permit of his completion of the operation.

Dr. Story today refused to discuss the cause of Pomeroy's death, but Dr. A. S. Ambler, who was Pomeroy's household physician, said that death had been due to malignant endocarditis, and had been induced by the desertion of the nurses.

A hotel building at Waupaca, Wis., is being fitted up as a hospital.

HOSPITAL FEES FOR INDUSTRIAL CASES.

Detroit Is First to Offer Definite Plan and Set Schedule of Fees in This Class of Cases.

Now that nearly every state in the union is enacting legislation to provide care for industrial workers, it is necessary for the hospitals to do their share to straighten out the perplexing problems incident to the hospital care of the sick who are entitled to industrial benefits of one sort or another. One of the first things to settle is the question of the hospital fees that must be paid by insurance companies and industrial employers. Massachusetts, always among the foremost to meet the needs of its people in public health matters, has had this matter under consideration for several months. It is given to Detroit, however, to announce a definite plan and fixed hospital fees in this class of cases. Under date of November 1 six hospitals of that city, acting together, promulgated the following notice, which must be of great interest everywhere:

To Employers of Labor and Insurance Companies:

The following represents a fee schedule adopted by the hospitals of Detroit as minimum fees for the board and care of industrial accident cases under the Michigan State Compensation Law. With the exception of the items for board, bed, and nursing, the fees outlined have been and are being charged by most of the hospitals of Detroit at the present time. The rate per day for board, bed, and nursing of compensation or industrial accident cases heretofore paid the hospitals of Detroit has been insufficient to cover the cost of maintenance of these patients.

The deficiency has been made up out of the income from endowment funds or voluntary contributions, which contributions are intended for the maintenance of charity or semi-charity patients.

The hospitals which are signatories to this schedule are not conducted for profit, and it is not their desire to charge any higher fees for services rendered than a figure approximating the average per capita cost. Accident or surgical cases cost the hospitals more for maintenance and care than any other class of hospital patients. It is believed that the rate of $15 per week is less than the average cost of maintenance o faccident or surgical cases, and one or more of the larger hospitals are now engaged in a system of cost accounting in order to establish accurate maintenance figures. The hospitals reserve the right to withdraw or change this schedule after due notice.

HOSPITAL FEES FOR COMPENSATION AND ACCIDENT CASES.

Bed, board, and general nursing (minimum charge $5.00), per week	$15.00
Operating room fee for each operation, large cast, etc.	5.00
X-ray examinations (including a second confirmatory examination)	10.00
Secondary surgical dressings	$1.00 to 2.00
Ambulance service, for first mile	2.00
Per additional mile	1.00
Special graduate nursing, including board of nurse, per day	4.75
Laboratory examinations (seldom needed in accident or surgical cases)	$2.00 to 10.00
Special drugs, serums, vaccines, mineral waters and liquors	at cost

HARPER HOSPITAL,
By Wayne Smith, Secretary Board of Trustees.
THE GRACE HOSPITAL,
By James H. Flinn, Secretary Board of Trustees.
ST. MARY'S HOSPITAL,
By Sister Camilla.
PROVIDENCE HOSPITAL,
By Sister M. Olympia, President.
SAMARITAN HOSPITAL,
By Wm. A. Hackett, Secretary Board of Trustees.
BOULEVARD SANITARIUM,
By H. R. Barton, Superintendent.

GERMANY'S CARE OF WOUNDED.

Special Type of Auto Car in Use on the Bloody Fields of Europe for First Aid and Transport.

The illustration shows two views of a novel type of automobile used for carrying sick or dead persons. This three-wheeled vehicle has the so-called cyclonette shape very common in Germany. It has several advantages over the usual four-wheeled motor cars or horse vehicles. The load of the engine lies over the front wheel, which thus receives sufficient pressure for adhesion. No load is carried on the rear wheels, and, as there are no gears, these are free from vibrations and noise, which for the sick person is decidedly important. The patient rests directly over the rear shaft.

The mechanism is very simple. There are no knuckles, levers, rods, or guide wheel, the steering being done as on a bicycle. Other complicated and expensive parts, such as cardan shaft or sprocket wheel, differential, water-cooling pump, spray carburetor, fan, etc., are not used, reducing the initial as well as the running expenses about one-half.

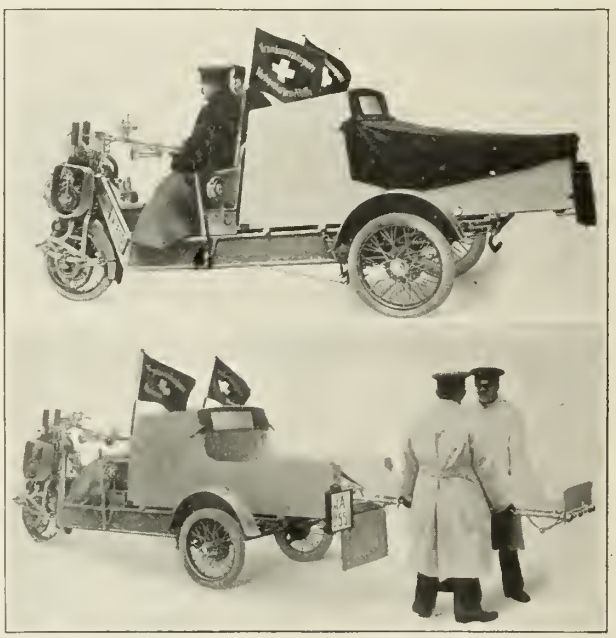


Fig. 1. German military auto car for first aid and transport. These cars are flying over all battle fields.

The engine is air-cooled by two vacuum coolers working automatically. The frame is principally of wood, with an elevated front. The back can be removed, as it is hinged, and it is easy to place the patient in and take him out of the car. The patient rests on a stretcher made of steel tubes, fitted with springs, and the head portion and both sides can be lowered or elevated. The car is approved by the Berlin League for First Aid.

The hind part is inclosed with sailcloth, which can be readily put on and taken off. At the upper part a window of flexible material is inserted, and space is allowed for the installation of a heating device. A box with the necessary appliances, bandages, etc., is always carried. The car can cover, with three persons, 50 kilometers an hour, and consumes in that time only about three liters of gasoline, which costs in Germany 1½ marks. Owing to lighter weight, the tires last longer, the car weighing, without stretcher, 350 kilograms.

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Vol. III *July, 1914* No. 1

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EUCERIN

The New Ointment Base

Is a cream-like ointment base of slightly yellowish color, without any odor and of ointment consistency.

It takes up readily an equal part or more of water.

It is stable without limit and cannot decompose.

In striking contrast to wool-fat, which is by no means stable and which tends to become pitchy and hard; and to the much used vaseline, which has no power whatever of retaining water. Eucerin is soft and of extremely supple consistency—properties which make it ideally suitable for the preparation of ointments.

Mercury in combination with EUCERIN as an ointment base disappears through the skin in about 5 or 6 minutes.

Let us send you samples and literature.

LEHN & FINK NEW YORK

YOUR PATIENT

may be only a "half portion" of a man, but he has twenty-six feet of intestines, and, unless they are kept healthy and active, the restoration of normal nutrition is impossible. The best food in recuperation for both stomach and intestines is

Shredded Wheat

It contains all the body-building elements in the whole wheat grain, made digestible by steam-cooking, shredding, and baking—also the bran coat in such form as to stimulate peristalsis without irritating the bowels or interfering with digestion. Being unseasoned, ready-cooked, and read-to-serve, it lends itself to the making of so many deliciously nourishing dishes that tempt the appetite of the convalescent. Special literature for physicians and nurses on request.

"IT'S ALL IN THE SHREDS"

MADE ONLY BY

The Shredded Wheat Company

Niagara Falls, N. Y.

EXCHANGE ROOM
AMERICAN MEDICAL ASSOCIATION
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NEW YORK

DEAR DOCTOR:—

Eucerin, the New Ointment Base, has so many important properties that we will be glad if you give us an opportunity to tell you about it and send you samples for test purposes.

Eucerin is derived from wool-fat. It mixes readily with water; is absorbed quickly by the skin; causes quick absorption of ointments made with it; makes bland, smooth combinations with the various drugs and medicaments; keeps indefinitely; never becomes rancid; has no odor; prevents spoiling or decomposition of any medicament combined with it.

We will send you literature on request.

LEHN & FINK.

"SAFETY IN SUMMER"

for the person in sickness or in health, in the hospital or in the office, outdoors or indoors, in work or play, comes from a wise selection of easily digested foods. The ideal diet for strength and recuperation in the sultry days is

Shredded Wheat

with milk or cream and fresh fruits—a combination that is cooling, sustaining and satisfying.

The wise doctor knows when to prescribe a food that stimulates peristaltic action and at the same time presents to the weakened digestive organs the maximum of nutriment with least tax upon the stomach and intestines.

SHREDDED WHEAT BISCUIT admirably meets these requirements. It is made of the whole wheat, steam-cooked, shredded and baked, in the cleanest, finest, most hygienic food factory in the world.

"IT'S ALL IN THE SHREDS"

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The Shredded Wheat Company

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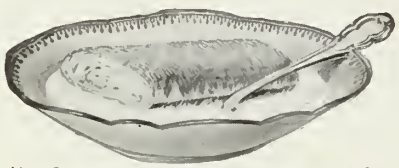

"IT'S ALL IN THE SHREDS"

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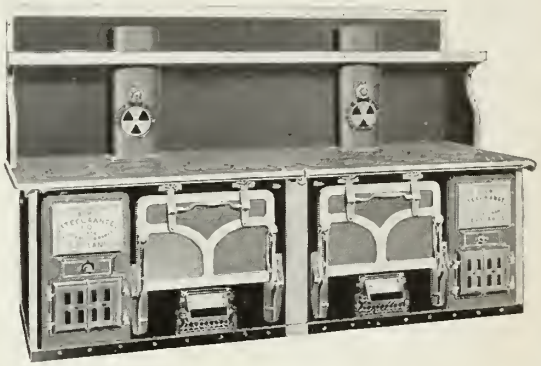
Niagara Falls, N. Y.

FAVORITE FOR OVER HALF A CENTURY

You know it is an **ALLENDALE** when you see this label

Write now to Dept. 4, Allendale, Providence, R. I., U. S. A.



EFFICIENCY

in the Kitchen

It pays to buy hospital cooking appliances from a manufacturer who understands requirements. Our experience entitles us to be classed as specialists in kitchen outfitting. Write us about your problems. Catalogs, plans, and suggestions free. Numerous institution references.

THE BORN STEEL RANGE COMPANY

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The MODERN HOSPITAL

Vol. III *November, 1914* No. 5

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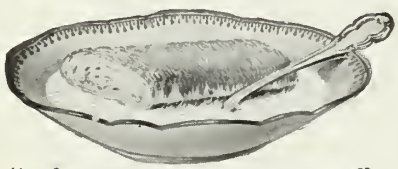
The Strongest Man in the World

is only a baby when he lies on his back in a hospital waiting for nurses, and doctors, and Nature, to restore him to health and strength. Strength can come from only one source—a nourishing, digestible food. When there is inability to take ordinary nourishment, it has been found that the following Shredded Wheat gruel will be digested by the most delicate stomach:

> Cook one Shredded Wheat Biscuit in milk until it has the consistency of gravy; then strain through fine cheesecloth, pressing all that will come through. This gruel that comes through the cheese cloth, seasoned to taste and served when needed, either with or without milk, is the very life of the wheat grain, and supplies nutriment when all other foods fail.

This Shredded Wheat gruel has saved the lives of thousands of babies. It will therefore save the lives of adults with baby stomachs.



"IT'S ALL IN THE SHREDS"

Made only by

The Shredded Wheat Company

Niagara Falls, N. Y.

Saves Coal!
Noiseless, Odorless
Sanitary

Radiator air valves look insignificant, but their task is herculean because most complex. Upon their efficiency depends the efficiency and economy of your whole heating system — and much more. The

KOALSAVE VACUUM AIR VALVE

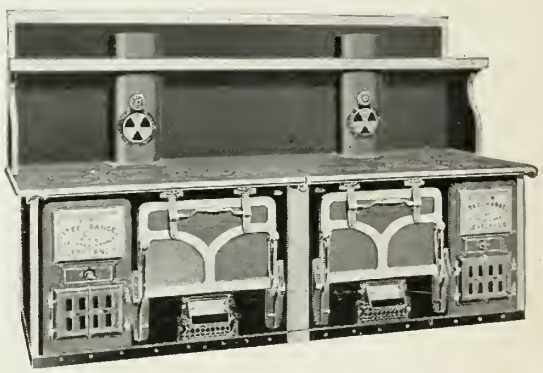
is the only air valve in the world that

1. Lets air freely out of the radiators.
2. Prevents leaking and consequent spoiling of floors, ceilings, and side walls.
3. Closes against escape of steam.
4. Keeps air out of system, thus turning your steam heating system into a Vacuum-Vapor System.

The valves are *noiseless, odorless,* and *foolproof.* They cut coal bills nearly in half.

Write todoy for prices and details

Koalsave Vacuum Valve Company
2560 Park Row Building
NEW YORK



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NEW YORK HOSPITAL
FOR RUPTURED AND CRIPPLED

The MODERN HOSPITAL

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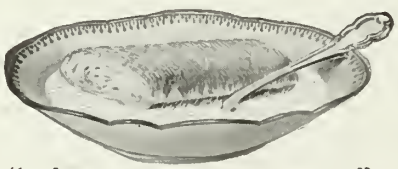
For Invalids and Athletes

A food that is just as nutritious for invalids as for athletes would be regarded by most Doctors as a "dietetic anomaly." The Doctor or the Nurse who understands the process of making

Shredded Wheat

knows why it restores strength to invalids and builds muscular tissue for athletes. It contains all the starch, albumen, and nutritive salts in the whole wheat grain, made digestible by steam-cooking, shredding, and twice-baking; also the cellulose of the bran-coat comminuted in such a way as to promote natural bowel movement. We are always glad to send samples to hospitals, physicians and nurses.



"IT'S ALL IN THE SHREDS"

Made only by

The Shredded Wheat Company

Niagara Falls, N. Y.

The doctor and the fever patient

Doctor—And now we'll see about what you want to eat.

Patient—Oh, doctor, don't talk about eating! Nothing tastes good and I'm tired of trying to eat to accommodate the nurse—and don't let me see milk again.

Doctor—Well, I have heard that before and I am going to suggest something different—how would you like to try

Welch's
Grape Juice

Patient—Welch's! I wish I COULD have some.

Doctor—Why, you just CAN have some. And then some more. I've rarely known it to fail to please. The nurse must give it to you in a small, thin glass, pretty well chilled, and with charged water if you prefer.

Patient—Tell them to hurry with it, doctor. I remember how refreshing Welch's is on a hot summer's day, and I know it's tart-sweet flavor will go right to the spot now. I wish all medicine tasted as good.

Should you not know Welch's both by reputation and quality, doctor, we shall be glad to send you a pint bottle with our compliments, through your druggist, if you will give us his name. Also it will be a pleasure to send you some of our special literature which we think will interest you.

The Welch Grape Juice Company, Westfield, New York

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